#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:

10/699,749

Confirmation No. 4254

Applicant: Filed:

Loren D. Mock Nov. 3, 2003

TC/AU:

3634

Examiner:

Blair M. Johnson

Attorney Docket No.: A10019 1010.1 (24.9)

Customer No.: 30166

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

#### DECLARATION OF LOREN D. MOCK UNDER 37 CFR 1.132

- My name is Loren D. Mock and I am employed as Manager of Product 1. Development Engineering for Amarr Company ("Amarr"), assignee of the above-referenced patent application. My responsibilities include design and development of new garage doors and components for garage doors. I am also the inventor of the invention claimed in the abovereferenced pending U.S. patent application. I have worked in the garage door industry for 11 years.
- Amarr was established in 1951 in Winston-Salem, NC. Quality products and 2. loyal customers have allowed Amarr to expand steadily during the past 50 years, making it one of the top four garage door manufacturers in the country. Amarr manufactures a complete line of sectional overhead garage doors for both the residential and commercial market in its Lawrence, Kansas; Whitehouse, NJ; and Monterrey, Mexico manufacturing facilities. Amarr's doors are sold worldwide by independent dealers and distributors who receive service from Amarr's 59 company-owned distribution centers located throughout the United States, Mexico, Canada, and Hungary. Amarr produces a variety of overhead doors that have the appearance of traditional

carriage house doors, including metal sectional doors with overlaid wooden facades, and embossed all-metal sectional overhead doors. Amarr's Classica Collection® doors were first introduced in 2004, and were the first garage doors in the world to have a carriage house look rendered in 100% pre-painted steel. Amarr's all-metal sectional carriage house doors are described and claimed in the subject patent application, and are shown and described in the Amarr Classica Collection® brochure attached as Exhibit 1.

3. I understand that the Patent Office has rejected my claimed overhead garage door as being unpatentable over published U.S. Pat. Application No. 10/078,031 by Leist et al. (Publication No. 2002/0179255) in view of U.S. Patent No. 6,446,695 to Forsland. I have studied these patents, and offer the following observations based on my own industry experience and knowledge. I begin with a brief overview of the evolution of the garage door from vintage carriage house doors to my invention.

#### Overview of the Evolution of the Garage Door

4. Garages and garage doors first appeared with the advent of the automobile in the late 1800's. Not surprisingly, many early automobiles were initially stored with horses and horse-drawn wagons, coaches and carriages in barns, stables, or so-called "carriage houses." These structures commonly included one or more pairs of swinging hinged door panels that cooperated to selectively close and open the buildings' large entranceways. As described in the background specification of the subject application, such doors typically included a plurality of horizontal frame members (known as "rails") and vertical frame members (known as "stiles") that combined to form a structural framework for the door. Inset panels were disposed and supported between the rails and stiles to form a continuous flat door panel. The inset panels often were constructed of a plurality of elongated vertical planks in edge-to-edge relation.

Adjacent planks often included mating tongues and grooves that along their edges. In order to provide the doors with additional strength and rigidity, one or more cross bucks sometimes were inserted between opposed corners formed by the intersections of opposed rails and stiles of a door's framework. The doors often were attached to a jamb of an entryway by a pair of large hinges. When closed, the two cooperating swinging doors abutted along their unhinged vertical edges, and defined a vertical gap or discontinuity between the abutted edges. Today, such large vertically-hung swinging doors constructed of rails, stiles, inset panels, and/or cross bucks commonly are referred to as "carriage house doors." Images of some traditional swinging carriage house doors constructed in this manner are shown in Exhibit 2. As shown in the images of Exhibit 2, traditional carriage house doors have a distinctive appearance characterized by a plurality of rails and stiles forming a framework, a plurality of inset panels disposed between the rails and stiles, and a vertical separation between the abutted non-hinged edges of a pair of doors. The appearance of such doors can be further characterized by one or more cross buck members and a plurality of planks or boards in edge-to-edge arrangement forming the inset panels.

5. The first overhead garage door was invented around 1921. Unlike the swinging door panels of traditional carriage house doors, overhead sectional doors include pivotally-connected horizontal door panel sections. The door panel sections include rollers that ride in tracks that guide the panels to a substantially horizontal open position that is inside and above an entryway. Accordingly, sectional overhead doors require substantially less unobstructed space around an entryway than do similarly sized swinging door panels. Overhead garage doors became increasingly popular, and eventually became the most commonly used type of garage door, especially in new construction. Like traditional carriage house doors, early overhead garage doors were constructed of wood. Unfortunately, wooden doors are subject to rot, decay,

and warping when exposed to weather. Accordingly, wooden doors must be periodically maintained to protect the wood components, such as by scraping and repainting or revarnishing the exposed surfaces. If not adequately maintained, wooden doors eventually must be repaired or replaced.

- By the late 1970's, garage door manufacturers had developed overhead sectional б. garage doors produced from painted galvanized steel sheet material. The thin-walled sheet metal door sections were substantially less heavy, and were far more durable and required less maintenance than wooden door sections. Amarr introduced its first steel sectional overhead door around 1983. Though others developed sectional overhead doors constructed of fiberglass and plastics, steel sectional overhead doors have been the most popular choice for residential garage doors for about the past 20-25 years. Images of some conventional steel sectional overhead The door described in published U.S. Pat. Application No. doors are shown in Exhibit 3. 10/078,031 by Leist et al. (Publication No. 2002/0179255) is another example of a conventional sectional overhead door. As can be seen in the images presented in Exhibit 3, conventional steel overhead doors included four or more horizontal sections or panels that are pivotally connected by hinges. In order to embellish the expansive outer surfaces of these doors, the faces of the panels often are embossed to include rows and columns of integrally-formed "raised panels." As shown in Exhibit 3, the raised panels are wider than they were tall. As also shown in Exhibit 3, the four elongated door sections and the horizontal rows of horizontal embossed patterns provide the doors with a pronounced horizontal visual emphasis that is substantially different from the vertical emphasis of the vintage carriage house doors shown in Exhibit 1.
- 7. Beginning in about the late 1990's, a new type of overhead garage door was developed. One such door is described in U.S. Pat. No. 6,446,695 to Forsland, which I

understand has been cited by the Examiner in the subject application. Examples of commercially available doors of this type are shown in Exhibit 4. Though the basic construction of such doors includes wooden or steel panel sections that are substantially similar to the sections of previous wooden or steel overhead doors, the exterior faces of the panel sections of such doors are Alternatively, such doors may be overlaid with facades overlaid with wooden facades. constructed of a wood by-product material such as weather resistant hardboard known in the industry as "MDO." These wooden facades include simulated rails, stiles, inset panels, and the like, such that when the overhead doors are closed, the doors have the simulated appearance of a plurality of swinging, carriage house doors. As can be seen from an examination of the various embodiments shown in Forsland and in the images presented in Exhibit 4, such doors with wooden facades include at least one common feature that provides the doors with the simulated appearance of two or more swinging carriage house doors. Specifically, the facade of each door includes a plurality of aligned vertical members, or "stile members." Each stile member is arranged on a door section such that it is vertically aligned with and abuts end-to-end with a stile member on an adjacent door section when the door sections are in a closed position. Such doors also may include a plurality of diagonal "cross buck" members. Each cross buck member is arranged on a door section such that it is diagonally aligned with and abuts in end-to-end relation with a cross buck member on an adjacent door section when the sections are in a closed position. This alignment of the stile members and any cross buck members helps to create the visual illusion that the aligned stile members and cross buck members constitute single continuous stiles or cross bucks of the type found in vintage carriage house doors. The apparent continuation of the stile and cross buck members across door sections helps to mask the vertical separation between adjacent sections. Such doors have the utility of conventional wooden or

Nevertheless, because the facades of such doors are constructed of wood or wood products such as MDO, such doors can require substantial maintenance to protect their facades from exposure to the environment. For example, such wooden facades typically may need to be repainted or restained at least every 3-5 years. In addition, such doors are relatively expensive to manufacture and purchase compared to modern all-steel overhead doors. For example, a door for a two-car garage constructed with steel panel sections and a wooden carriage house facade can cost between about \$4,000 to \$5000. Furthermore, such doors can weigh 750 lbs. or more, thus making installation and lifting such doors problematic.

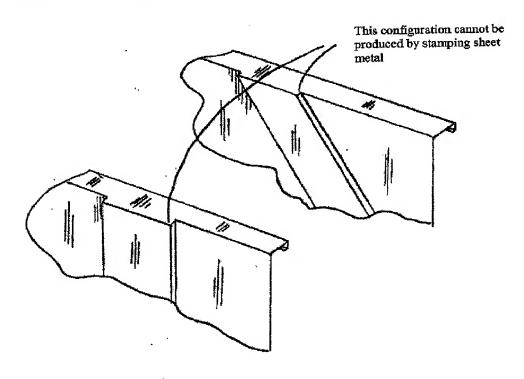
8. Others have attempted to reduce the maintenance requirements, high cost, and burdensome weight of overhead doors having wooden carriage house facades by replacing the wooden facades with overlays constructed of lighter and more durable materials. For example, stile and cross-buck members constructed of polystyrene, polyvinyl chloride (PVC), or other synthetic materials can be affixed to steel door sections to at least roughly simulate the carriage house look in much the same way as described above for wooden facades. One example of such a door with synthetic overlays is described in U.S. Pat. No. 6,148,896 to Pinto et al. Additional examples of commercially available overhead "carriage house" doors with synthetic overlays are shown in Exhibit 5. Problems with such doors include possible separation of the plastic facade members from the steel door sections, and cracking or deformation of the plastic components due to impacts or exposure to heat and sunlight. Such doors also may have a shoddy overall appearance, especially when viewed up close. In addition, such doors can be relatively expensive to produce and purchase. For example, a two-car garage door with steel panel sections and a synthetic carriage house facade can cost about \$2,000 to \$3000.

#### My Invention Satisfies a Long-Felt Need

In order to address the problems associated with "carriage house" overhead 9. garage doors with wooden or synthetic facades, and to provide a lower-cost alternative to such doors, I developed an all-steel overhead garage door having the simulated appearance of two or more swinging carriage house doors. At least since 1997, others have recognized that overhead sectional garage doors with wooden facades are extremely costly to produce, and too expensive for many consumers. See Exhibit 6, "Specialty Market 'Opens the Door' to Success", Custom Woodworking Business, Nov. 1997 (quoting Stacy Nichols, administrative manager for Designer Doors, Inc., a company founded by Kent Forsland, sole inventor of US Pat. No. 6,446,695: "A lot of people who are interested in our doors see the price tag and throw their hands up in horror.... But our doors are very labor-intensive; they are built one at a time and take anywhere from 25 to 125 hours or more to produce. So they are expensive.") Today, a typical double overhead garage door with a wooden carriage house door facade costs about \$8,000 -\$10,000. In addition, the cost to install such a door is about \$300 - \$600. At least since 2000, others have recognized that wooden doors such as wooden Carriage House doors require substantially more maintenance than steel garage doors. See Exhibit 7, "Varied Choices for Garage Doors Open up Opportunities to Enhance Home's Look, Pittsburgh Post-Gazzette, Oct. 28, 2000 ("Unlike steel, which never needs to be repainted, wood requires regular repainting and restaining"). In addition, as explained in the specification of the subject application, doors with wooden facades are extremely heavy. Such heavy doors present special installation problems, require more expensive heavy-duty counterbalance and lift mechanisms, and require additional structural support in an entryway.

The task of developing an all-steel door having the simulated appearance of 10. carriage house doors involved several substantial challenges. First, as explained above, the overall visual appearance of conventional all-steel sectional overhead doors is characterized by an emphasis on horizontal features or visual elements. This "horizontal" aspect of steel overhead doors contrasts starkly with the largely vertically-oriented features of vintage carriage house doors. In conventional steel overhead doors, this horizontal emphasis is particularly exaggerated by the use of four relatively short door sections (typically 18 to 21 inches tall) and embossed raised panels that are wider than they are tall. (See Exhibit 3). In addition, the facade configurations described above for "carriage house" overhead doors with wooden or synthetic overlays are impossible to replicate in a door section formed exclusively from a continuous piece of sheet metal. As described above, doors with wooden and synthetic overlays largely achieve a carriage house "look" by aligning stile and cross buck members on adjacent door sections in endto-end relation such that the aligned members appear to constitute a continuous frame member that spans multiple door sections. In order to accomplish such a configuration in a one-piece stamped sheet metal panel, the upper (and lower) edges of the section must be formed as shown below:

Appl. No. 10/699,749 Declaration of Loren D. Mock



As shown in the above figure, such a configuration requires the formation of several outside corners and inside corners that each are defined by the intersection of three substantially perpendicular planes. Because the strains imparted to the sheet metal in these corner regions exceed the limits of the thin-walled material, the material ruptures before the metal can be forced to plastically conform to such shapes. Accordingly, such configurations cannot be produced by stamping sheet metal.

11. My invention overcomes these challenges. First, as shown in Figs. 1 and 12A-12L of the application, an overhead door according to my invention preferably includes only three pivotally connected door panel sections rather than four sections. By using three rather than four door sections, the horizontal visual emphasis of a conventional four-panel steel overhead door is diminished. Reducing the number of panel sections in an overhead door from

four to three is not an insubstantial task. As explained in co-pending U.S. Pat. Application No. 11/098,187 filed April 4, 2005, a three-panel steel overhead door creates unique problems regarding lifting the door with a conventional linear automatic garage door opener. Second, as shown in Figs. 2, 4-9 and 11, the top and bottom edges of each of the door sections is formed by the intersection of not more than two intersecting planes or surfaces. Thus, the problem of forming upper and lower panel edges that include three intersecting planes or surfaces is eliminated. The look of a stile and rail door frame construction is achieved, however, by aligning each vertical frame member or "stile" portion of each panel with a corresponding "stile" portion of each adjacent door section. Similarly, when the embossed patterns of at least two adjacent sections include a diagonal frame member or "cross buck" portion, the appearance of a continuous cross buck spanning two or more door sections can be achieved by aligning the cross buck portions of adjacent door sections. (See, e.g., Figs. 1 and 12A-12C of the application).

12. A door according to the invention also includes other novel features that contribute to the simulated appearance of a carriage house door. First, as shown in Figs. 2, 5, and 7 of the application, each embossed panel pattern has a height-to-width ratio (H/W) greater than 1:1, and preferably has a height-to-width ratio of at least 1.2:1. By making the embossed patterns at least as tall as they are wide and preferably taller than they are wide, the embossed patterns provide a vertical visual emphasis not found in previous steel raised-panel overhead doors. This vertical emphasis contributes to the overall simulated appearance of a vertically-hung carriage house door. Second, one or more vertical grooves are provided in each door section. When the door is closed, the vertical grooves align with each other, and provide the visual impression of a vertical separation between two swinging carriage house doors. Third, portions of the door on either side of the aligned vertical grooves are bilaterally symmetric with

each other, thereby providing the appearance of a first swinging door on one side of the vertical separation, and a second swinging door on the opposite side of the vertical separation that is a mirror image of the first swinging door. (See Figs. 1 and 12A-12L)

13. A door according to my invention is much more affordable than overhead doors with overlaid carriage house door facades. The typical cost for a double garage door according to my invention is about \$1400.00 - \$2900.00. In addition, the cost to install a door according to my invention is about the same as a conventional steel raised-panel garage door. Accordingly, my invention satisfies a long-felt need for an overhead "carriage house" door that is substantially more affordable and durable than doors with wooden or synthetic overlays.

#### My Invention is Commercially Successful

14. Amarr first introduced its Classica Collection® of steel "carriage house" garage doors according to my invention in January, 2004. Since that time, Amarr has sold approximately 50,000 units worth about \$35,500,000. In addition, Amarr's Classica Collection® received industry acclaim as one of the top new products introduced in 2004. As shown in Exhibit 8, Amarr's Classica Collection® was named as one of the top 25 new products of 2004 by both Building Products Magazine and Design/Build Magazine.

#### My Invention was Promptly Copied by Amarr's Competitors

15. Since Amarr introduced its Classica Collection® of doors according to my invention in 2004, all of Amarr's major competitors have begun selling steel-carriage house doors that include one or more novel features of my invention. Examples of steel carriage house doors currently offered by some of Amarr's major competitors are shown in Exhibit 9.

#### My Invention Would Not Have Been Obvious to a Person of Ordinary Skill in the Art

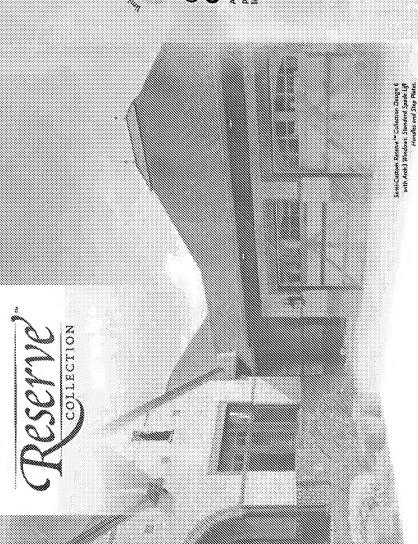
At least for the reasons stated above, it would not have been obvious for a person 16. of ordinary skill in the art at the time of my invention to modify the substantially conventional steel overhead door described in U.S. Pat. Application No. 10/078,031 by Leist et al. (Publication No. 2002/0179255) to include the appearance of the doors with wooden overlays described in U.S. Pat. No. 6,446,695 to Forsland. First, as explained above, the facade configurations shown in Forsland cannot be replicated in a stamped sheet-metal door. Second, unlike the substantially conventional metal door shown in Leist, a preferred embodiment of my invention includes only three door sections rather than four, thereby minimizing the horizontal visual characteristics of conventional steel raised-panel doors. Third, unlike the horizontal embossed patterns shown in the panel sections of Leist, a preferred embodiment of my invention includes embossed patterns that are taller than they are wide. Fourth, neither Leist nor Forsland show vertically-aligned grooves in the thin-walled skins of every door section that combine to simulate a vertical separation between two adjacent swinging carriage house doors. Other evidence of non-obviousness includes a long-felt need for an alternative to expensive and maintenance-intensive carriage house doors with wooden or synthetic overlays, the commercial success and industry acclaim of my invention, and prompt copying by Amarr's competitors.

I hereby declare that all statements made herein of my own knowledge are true and that any statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States

Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

This is the 16 day of JUNE 2006.

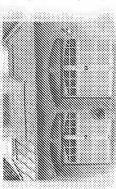
Loren D. Mock



# 

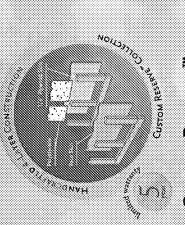
Wood. The trendsetter of garage door designs. Adds instant warmth and architectural distinction.

Armed with a homeowner's windows or without-for unlimited potential in woods like mahogany and teak. sketch or architect's drawing, we can create just about any door you imagine-with



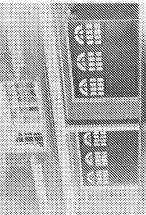
Semi-Castom liazzaz \*\* Colisatión Design 2 vith AzAl Windows Standard Spoot Site Plates, Optimos Desiruable Handles with Repliedes

and the Custom doors, the paned and glazed for that added measure of craftsdecorative hardware is available on Custom and window glass is individually manship. Our antique fron Senti-Custom doors.



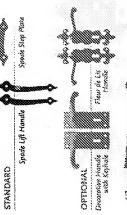
# Custom Reserve" Collection Doors

plans, we can create what you envision. So the only Armed with a sketch of your idea or an architect's limit is your imagination.

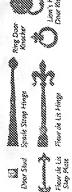


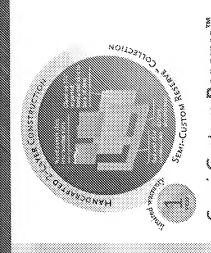
Custon Preene "Loberton

# DECORATIVE HARDWARE



In both the Semi-Custom





# Semi-Custom Reserve" Collection Doors

choice of wood (redwood, hemiock, ceder) and hardware designs, it's easy to create a custom kook at With six door and window styles that you can mix and match for unlimited possibilities, as well as your serni-custom prices.

WOOD SPECIES Available in Redwood, Cedar, and Hemlock, both Paint and Stain Grade.

	STAIN CRADE	PAINT GRADE
KADS.	REDWOOD CEDAR HEMLOCK	HEMLOCK MSKCOCK
PANELS	PANELS: Nadocond Cedar Hemhods	Smooth Cotobet

Factory prinning is invallable on hemiliak disors.

# A FEW EXAMPLES OF







Darign & Archiv Dosign S, Arch3

Coops & Swit

cedar, or hernikok word panek. Differences in grain and oskor nariasions are indicative of natural wood. These are not considered produst defects. Paint Grade doors are mede with exterior grade VOTE: Stain Grade doors are made with edge glued reduced. MAND physocial panels. Paint Grade doors cannot be stained

# BECAUSE EVERY ENTRANCE MAKES AN IMPRESSION

- ass⊃ .





## DESIGNER DOORS"

PIONEERING POSSIBILITIES

# In Pursuit of Perfection

- CSSD ----

#### WE PIONEER POSSIBILITIES

- (SS) -----

INSPIRED BY THE CUSTOM-MADE WOOD CARRIAGE DOORS OF A BY-GONE ERA,
DESIGNER DOORS BUILDS ENTRANCES THAT NOT ONLY COMPLEMENT BUT ENHANCE THE BEAUTY
OF ANY HOME. WE HAND CRAFT EACH AND EVERY DOOR, JOINING OLD-WORLD CRAFTSMANSHIP
WITH MODERN ROLL-UP TECHNOLOGY. THE RESULT IS A DOOR WITH UNSURPASSED QUALITY,
AESTHETICS, AND FUNCTIONALITY.



PROVENCAL BCVH-231



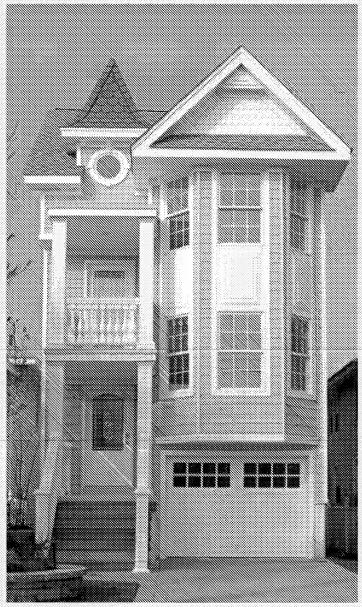
### PRESERVING ARCHITECTURAL INTEGRITY



BECAUSE EVERY ASPECT OF A HOME CONTRIBUTES TO ITS CHARACTER, YOUR GARAGE DOORS AND OTHER ENTRYWAYS SHOULD BLEND WITH ALL OTHER DESIGN ELEMENTS TO MAKE A UNIFIED STATEMENT.

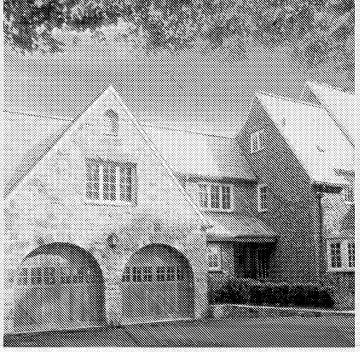
OUR GARAGE AND ENTRADA™ WALK-THROUGH DOORS ENHANCE THAT STATEMENT BY MATCHING YOUR HOME'S ARCHITECTURE, HERITAGE, AND TEMPERAMENT—SEAMLESSLY AND STYLISHLY.

AT DESIGNER DOORS, WE ARE PART OF THE DESIGN/BUILD TEAM, WORKING CLOSELY WITH ARCHITECTS, BUILDERS AND HOME OWNERS TO MAKE SURE THEIR ARCHITECTURAL VISION IS CARRIED OUT IN EVEN THE SMALLEST DETAILS.



CARROZZA BSVN-242

This tuck-under garage door blends in perfectly with this home that measures just twenty feet wide.

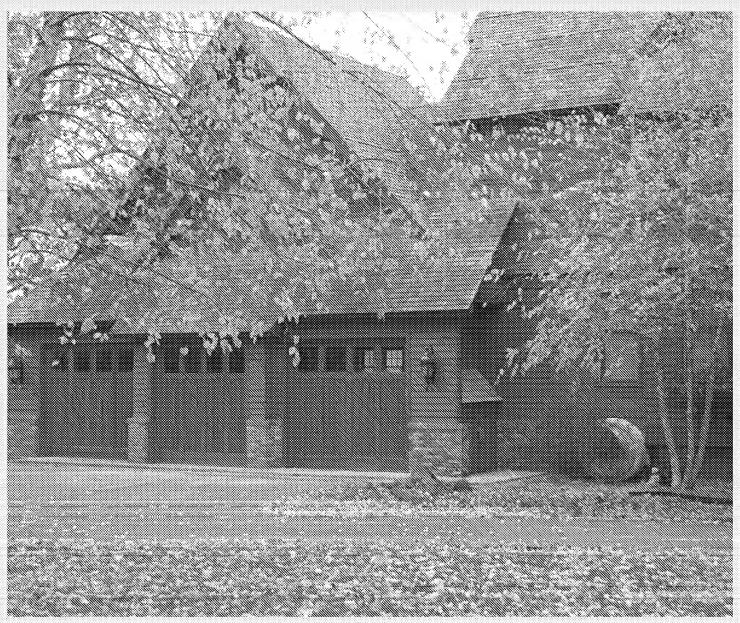


**CUSTOM PROJECT 78645** 

These doors appear to swing open but in fact roll overhead.

The refined doors and windows balance the rough-hewn stone and complex rooflines of this classic style.

# One-segment custom and Standard Doors 4 5 Iwo-segment Custom and Standard Doors 6 7 Ihree-segment Custom and Standard Doors 8 - 9 American Greats' Traditional Banel Doors 10 Designer Doors' Showcase 11 Product resumes 12 Design heatures 13



SEMPLICE SSVW-411

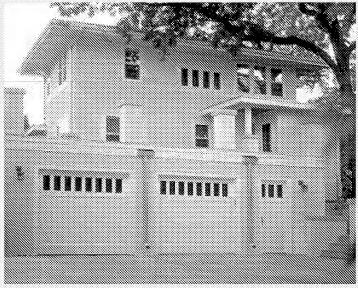
# Simple. Classic.

#### ONE-SEGMENT DOORS SPEAK VOLUMES

- ලංකා -

JUST LIKE THE ONE-PIECE DOORS OF 50 YEARS AGO, SINGLE-FACED DOORS APPEAR TO SLIDE BACK OR SWING OVERHEAD, YET THEY ROLL UP JUST LIKE MODERN GARAGE DOORS.

SIMPLE, STRAIGHTFORWARD, AND CLASSIC. CHOOSE FROM OUR STANDARD SEMPLICE LINE OR CUSTOMIZE WITH YOUR OWN DECORATIVE TOUCHES.



**CUSTOM PROJECT 1392** 

The garage door windows and panels match the repeating geometric patterns of this prairie-style home. A matching Entrada™ walk-through door adds to the effect.



**CUSTOM PROJECT 1122** 

To contrast the horizontal orientation of the logs, Designer Doors created a double wide door with vertical surface materials and window groupings that replicate the proportions of the balcony above.



**CUSTOM PROJECT 1968** 

A simulated center post (page 13) breaks the horizontal opening of these doors, which appear to be two separate doors but actually function as one double garage door. Designer Doors holds the patent for this design.

#### → THE DESIGNER DOORS DIFFERENCE: COMMITTED TO INNOVATION >

Designer Doors proneered the revival of handcrafted carriage doors in 1987. We combined the architectural refinement and authentic appearance of carriage doors with innovations that allowed the doors to open overhead like modern garage doors.

But we didn't stop there. Over the years, we have continued to be the leader in uncovative design and engineering. Designer Doors holds more patents than any other wood garage door company in the industry. We introduced the Simulated Center Post (page 13). Plural facades and other unique designs (page 13). The Hurricane Frame\* that can withstand wind loads up to 140 mph (page 12). Integrated walk-through doors (page 9). And, wicket doors (page 11).

At Designer Doors, innovation is our passion.

# Dramatic. Bold.

#### TWO-SEGMENT DOORS PROCLAIM THE PAST

- ©≪© -

THESE DOORS APPEAR TO SWING OPEN LIKE TRADITIONAL CARRIAGE DOORS BUT ACTUALLY ROLL OVERHEAD. ALTHOUGH FREQUENTLY USED ON RUSTIC HOMES, TWO-SEGMENT DOORS CAN BE CUSTOMIZED TO FIT THE ARCHITECTURE OF ANY BUILDING. WE ALSO OFFER OUR STANDARD CARROZZA AND PROVENCAL LINES, WITH STRAIGHT OR ARCHED TOPS, PROVIDING A BROAD RANGE OF STYLISTIC CHOICES.



#### \* THE DESIGNER DOORS DIFFERENCE ONLY THE BEST IS:

We believe that it is more important to provide long lasting value rather than simply reduce costs. Our philosophy has been and will continue to be to build our doors with absolutely the highest quality, best suited materials available.

That's why we use clear non-finger-jointed Douglas Fir for our frames and clear-grade Western Red Cedar for facing material.

Our moisture control system includes no exposed end grain, vent holes, integrated drip cap. 10° slope under the lites, and a bottom astragal that assures that the bottom of the door will never touch the ground. Cope-and-stick joinery, pocket hole and screwed frame joints, and tongue and groove construction also make Designer Doors stand apart.

Each door is individually engineered with the strongest, most reliable operating hardware available.

Our decorative hardware is hand-forged by our own blackemiths.

Our competiors cut comers. We never have, and never will. That's what makes a Designer Door.



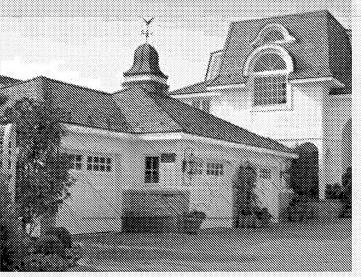
**CUSTOM PROJECT 480247** 

The gently arched Southwestern-style doors fit perfectly into the rugged stone exterior of this home. Custom-made clavos and door pulls complete the swing-open styling.



PROVENCAL BCVN-232

Window clusters accentuate the casual appeal of this house, including those in the garage and matching Entrada™ walk-through door.



CARROZZA BSVX-242

Notice how the garage door windows reflect the custom windows. These doors also boast a full set of bucks, adding to the carriage house appeal.



**CUSTOM PROJECT 78294** 

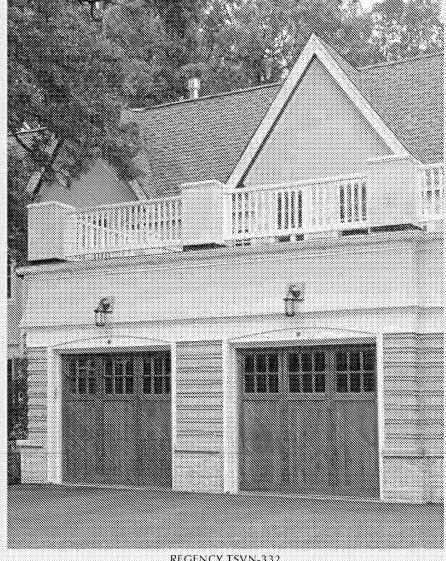
# Elegant. Graceful.

---------- (SSSD)

#### THREE-SEGMENT DOORS TELL A STYLISH STORY

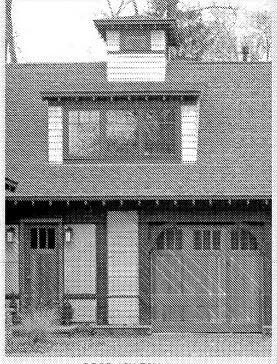
<del>-</del> ලාන -

APPEARING TO OPEN AND CLOSE ACCORDION-STYLE, THESE DOORS HAVE A UNIQUE AND ELEGANT LOOK. BUT UNLIKE THEIR APPEARANCE, THEY ROLL UP WITH MODERN OVERHEAD TECHNOLOGY. CHOOSE FROM OUR STANDARD REGENCY LINE OR CREATE YOUR OWN CUSTOM DOOR.



**REGENCY TSVN-332** 

Since the garage is the most prominent feature of this home's front facade, the doors make an immediate impression from the street. The elegant look of Western Red Cedar provides warmth to the neutral tones of the architecture.

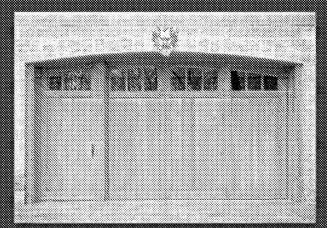


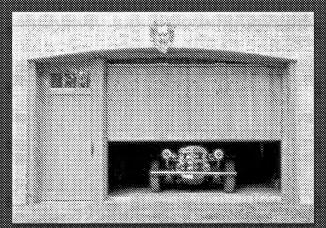
**REGENCY TSVN-331** 

The three-window grouping is reflected in the architectural details on the window above. Note the matching Entrada™ walk-through door.

#### - THE DESIGNER DOORS DIFFERENCE: TURNING CHALLENGES INTO TRIUMPHS

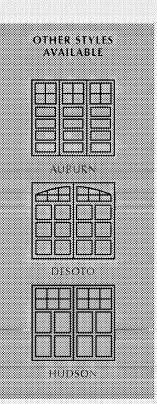
Our expertise and experience enable us to tackle problems that sometimes drive our competitors away. Whether the issue is limited overhead space, unusual sizing, or a need for custom walk-through doors, our team of experts will deliver a solution as functional as it is elegant.





COSTON PROJECT 1707

The challenge. Create a garage door and a walk-through door in the same opening. The triumph: a beautifully engineered solution that boasts a Designer Doors patent — and a satisfied client.





PACKARD AGPF-322

The simple lines of this Packard door help it blend into the facade of this Colonial.

## American Greats

- a

A SALUTE TO AMERICA'S HERITAGE



OFFERED IN SIX STANDARD DESIGNS, THESE UNIQUELY AMERICAN STYLES REMINISCE THE COMING OF THE AUTOMOBILE INTO AMERICAN CULTURE. THE STURDY EXTERNAL FRAME HOLDS A SOLID WOOD PANEL, MAKING THE DOOR LIGHTER AND MORE COST-EFFECTIVE THAN OTHER MODELS.



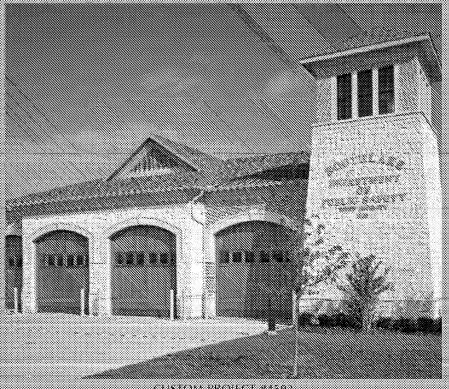
TUCKER AGTF-222

The Tucker is an ideal complement to this Prairie style home. Panels around the perimeter define this American Greats™ style.



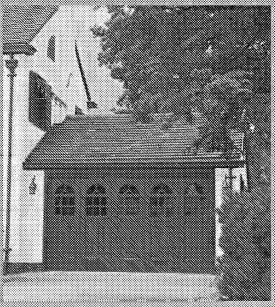
STUDEBAKER AGSF-233P

The surface material in the American Greats™ series can be MDO or Cedar raised panel. The two-tone finish adds dimension and picks up on the brick exterior.



CUSTOM PROJECT 84592

The impressive 14 it, high doors of the South Lake Fire Department in Fort Worth, Texas.



CUSTOM PROJECT 2808

This historic Winona, MN home had vintage garage doors that rolled sideways on a track. When it needed to be replaced, the homeowners asked if we could: replicate the original doors based on a cloth blueprint they lound in their attic. The result, historical accuracy with modern roll-up technology.

# Designer Leons

. (3000)

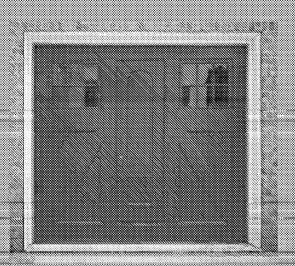
#### CRAFTSMAASHEE MERGED WITH INVOVATION

TODAY, ARCHITECTS, BUILDERS, DESIGNERS AND HOMEOWNERS ARE DISCOVERING THAT GARAGE DOORS NEEDN'T BE SIMPLY GARAGE DOORS. THEY CAN BE STATEMENTS IN THEMSELVES, CONSIDER SOME OF THESE MORE DISTINCTIVE PROJECTS.



CUSTOM-PROJECT-62915

Unique corners and clusters of four windows support the architectural complexity or this Victorian Queen Anne home -- a surking statement of the owner's individuality.



CUSTOM-PROJECT-78294 ..

When space doesn't permit a separate walk through door, a wicker door, which is actually integrated into the gatage chos, may provide a solution.



#### CONSTRUCTION OPTIONS



#### FACE MATERIAL

Our standard facing material is clear-grade Western Red Cedar. No manmade material can match its richly textured grain and palette of warm, mellow tones. Natural oils within the wood help preserve it and resist attack from insects.

In addition to Western Red Cedar, we offer genuine mahogany, redwood, cypress, Spanish cedar, alder, cherry, maple, white oak, walnut, teak and other wood species as requested.

Many people choose to paint their doors to match or complement their home color. In this case, you may choose superior quality MDO plywood for its weatherability and excellent paint retention characteristics.

#### A MENACERIE OF CLASS

Our standard offering is double strength glass. However, you can specify a variety of specialized glass, designed to provide privacy, energy efficiency or impact resistance. We regularly install tempered, insulated, tinted, or specialty glass into our doors for an additional cost. Simply let us know what glass you want and we will incorporate it into your doors.

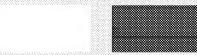
#### 

True divided lites use a separate pane of glass for each lite. Simulated divided lites duplicate this effect with muntins adhered to the front and back surfaces of the glass. Designer Doors' standard product offering specifies true divided lights, unless insulated glass is used, in which case we construct simulated divided lites. Or, we will provide simulated divided lites upon request.

#### OPERATING HARDWARE

Our radius-track system can be engineered to fit doors of any size or shape. All the hardware is galvanized for long-lasting performance. We offer powder coating as a finish option for rails, tracks, and other obvious hardware. This adds a more finished look for the discriminating homeowner.

#### POWDER COATING COLOR SELECTIONS



Charlie Brown



Shadow Black

#### RECOMMENDED DOOR OPENER

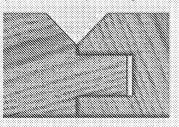


Electron White

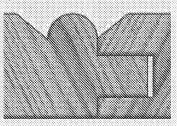
Designer Doors are built as an enduring entrance to the home. We recommend the 3/4 HP LiftMaster™ 2595 Estate Series door opener for dependable door lift operation.

#### STANDARD MILLWORK OPTIONS

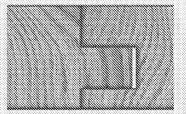
In addition to the popular millwork designs below, we offer many other possibilities. Ask your Designer Doors representative for more information.



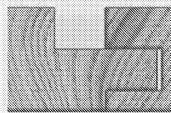
4 or 6-inch V-Groove



Beaded Tongue and Groove



Flush Face Tongue and Groove



Square Groove

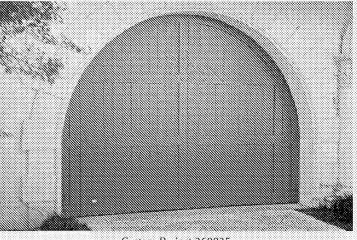
#### ENVIRONMENTAL OPTIONS

#### **HURRICANE FRAME PACKAGE**

A full-length Douglas Fir frame, braced front and back with exterior grade plywood panels, enables this package to meet the strict building codes of Miami-Dade county in Florida. It is the only custom wood overhead garage door certified to withstand 140 mph wind-loads and is also impact rated.

#### HIGH-HUMIDITY INSECT-RESISTANT PACKAGE

Ideal for homes in high-humidity environments, these doors are treated with EPA-approved borate rods. The rods are toxic to termites, carpenter ants, beetles, many other wood-boring species, and fungus.



Custom Project 360025

Solidly elegant example of an arched wood door, guaranteed to get attention.

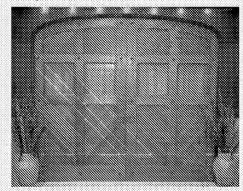


#### STYLE OPTIONS



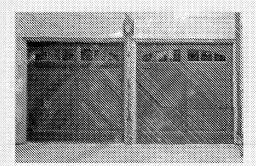
#### DESIGN PATTERNS

Your options are as unlimited as your imagination. Choose a Herringbone or modified Herringbone, or a mixed pattern. Create your own personal statement.



Custom Project 800132

A daring and distinctive approach to a Herringbone design, constructed with quartersawn white oak and accented with hand forged hardware for an old-world flavor.



Custom Project 66225

Another example of the Herringbone style.



Custom Project 1404

In this case, the architect chose to mix several patterns on the door surface. Notice the simulated center post.

#### SIMULATED CENTER POSTS

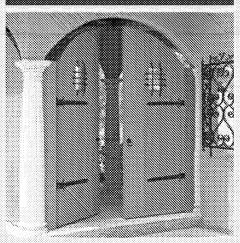




Packard AGPF-622

The simulated center post in this doublewide door gives the impression of two separate doors. It is most often used to break up long horizontal openings. This design is exclusively patented by Designer Doors.

#### SWING DIOLORS



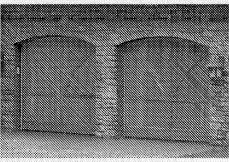
Custom Project 340083

We offer you the option of doors that swing open, rather than roll overhead. Ask your Designer Doors representative for more information.

#### DECORATIVE BUCKS

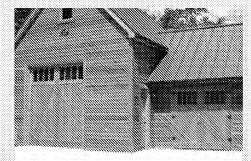
Traditionally used as structural braces, bucks today add styling to doors and contribute to a sense of historical accuracy.

A door can incorporate half bucks, cross bucks, or even customized variations that transform a garage door into a virtual work of art.



Custom Project 70811

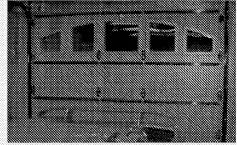
Curved Bucks



Custom Project 90649

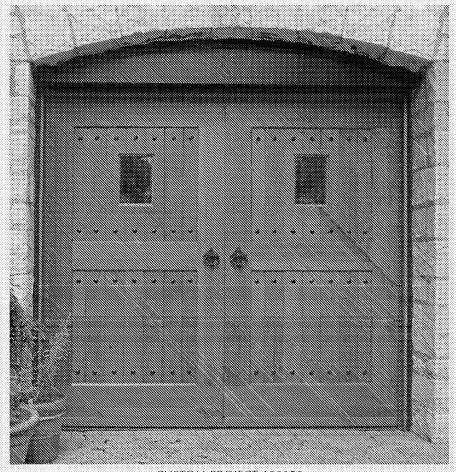
Half Bucks

#### AN EXQUESTRE INTERIOR



Custom Project 70718

Finished interiors can be a blended version of the exterior design or a totally unique look.



**CUSTOM PROJECT 130158** 

#### HAND FORGED HARDWARE

– ලංකා ·

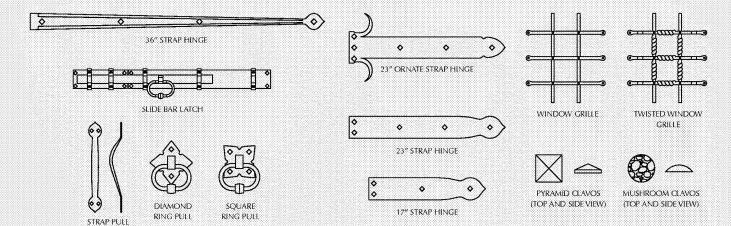
- OSSO -

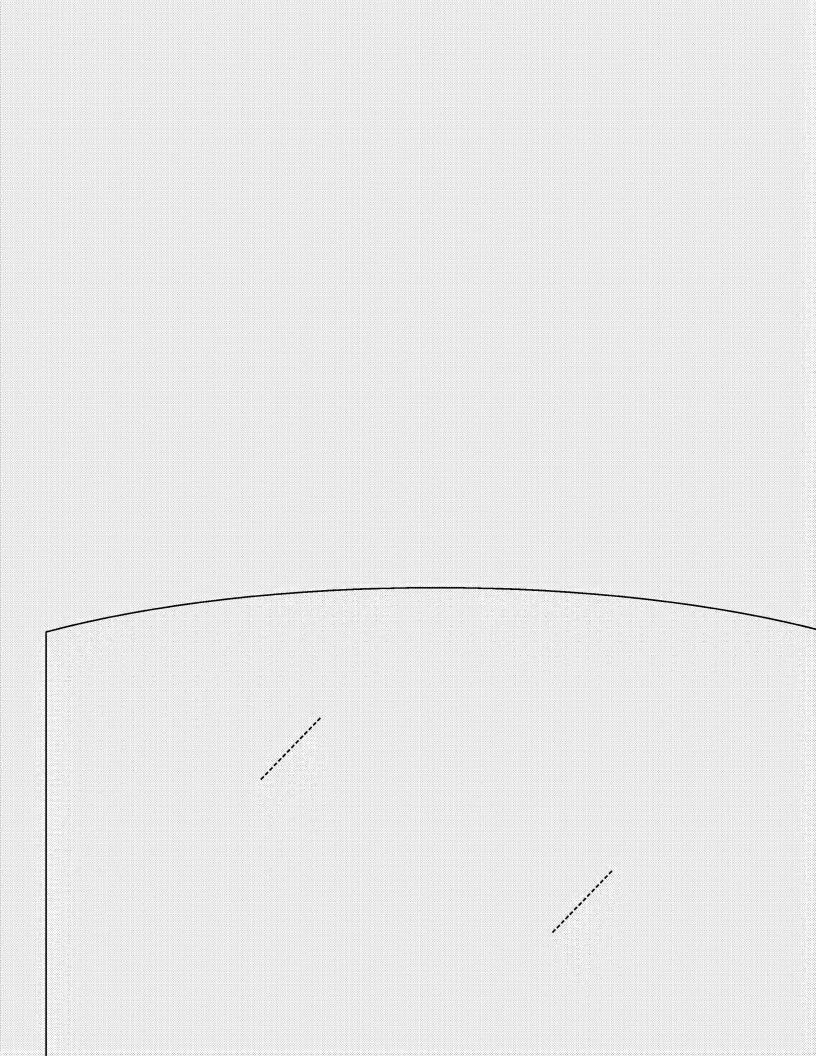
ALL OUR HARDWARE IS INDIVIDUALLY FORGED USING FIRE AND ANVIL TO RECREATE

AUTHENTIC HINGES, GRILLES, LATCHES, AND PULLS.

OUR BLACKSMITHS COAT EACH PIECE OF HARDWARE WITH BLACK ZINC CHROMATE; THE FINISH RESEMBLES WROUGHT IRON BUT PROVIDES SUPERIOR WEATHER RESISTANCE.

IF OUR STANDARD HARDWARE DOESN'T FIT YOUR DOOR'S STYLE, OUR DESIGNERS AND BLACKSMITHS CAN CREATE A CUSTOM MATCH FOR YOU.







#### ELEGANCE, FUNCTIONALITY, QUALITY.

(600) -

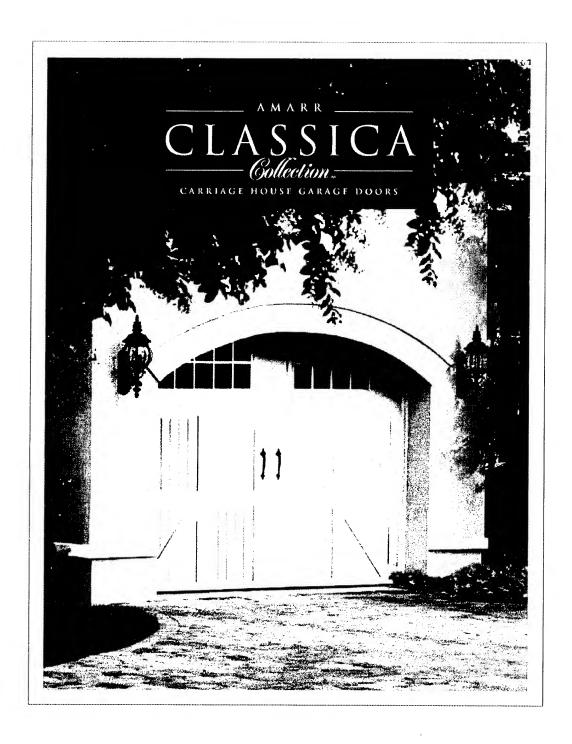


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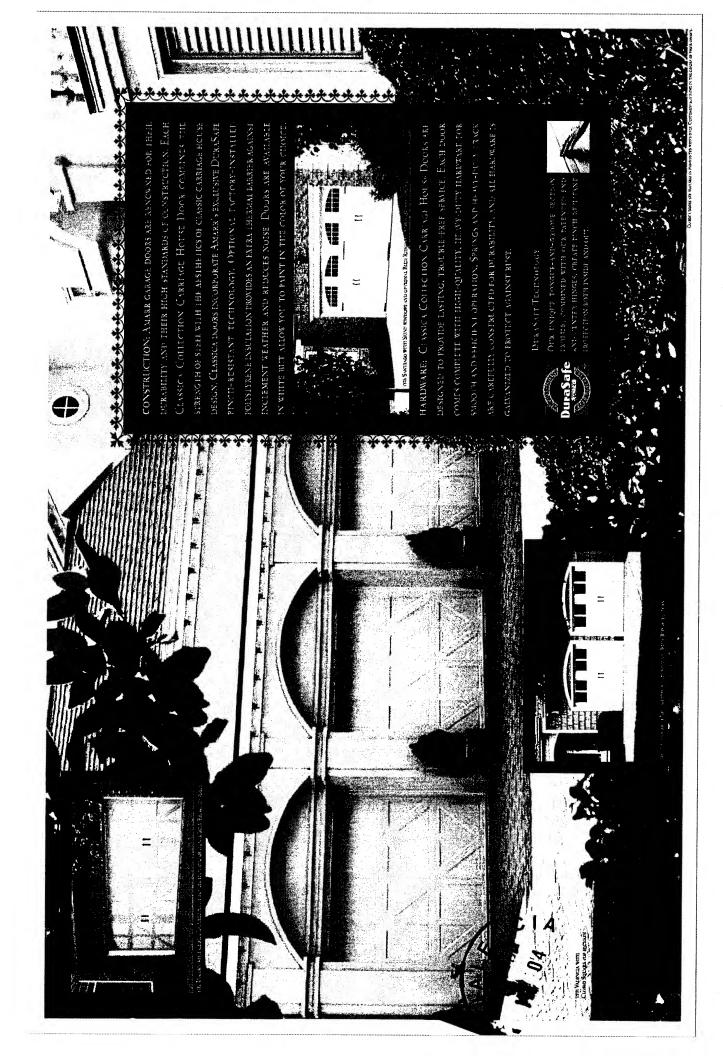
www.designerdoors.com

Commissioned Projects, European Inspirations, American Greats, Emitted Editions Planeer Internal Frame, Vintage Internal Frame, and Emitada are mademarks of Designer Doors ©2004 Designer Doors, Inc.

DD100-9/04 10K







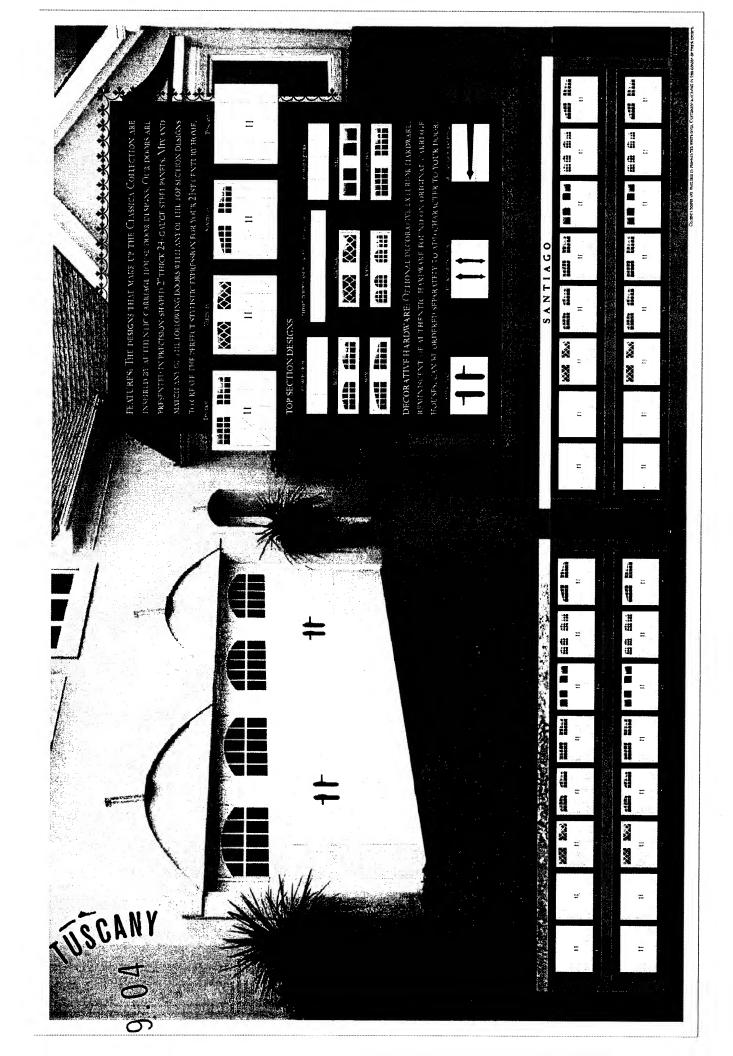


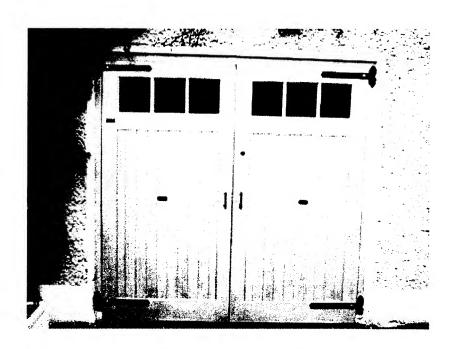


Exhibit 2

Examples of Traditional/Vintage Carriage House Doors



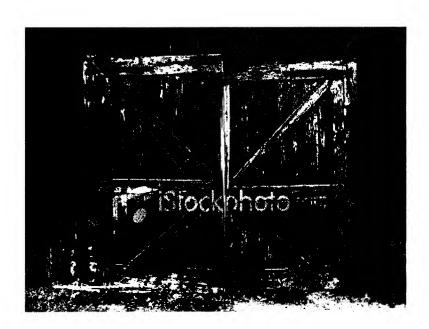
1. Traditional Swinging Carriage House Doors



2. More Traditional Swinging Carriage House Doors (w/ Tongue & Groove Panels and Glazed Windows)



3. More Traditional Swinging Carriage House Doors



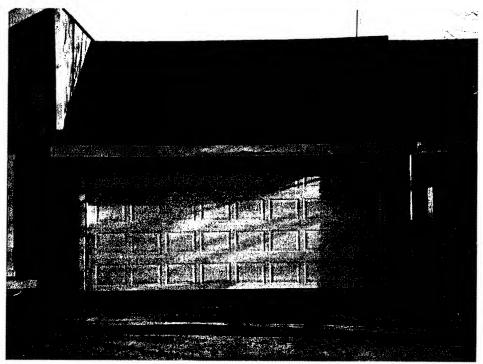
4. More traditional swinging Carriage House Doors (with Cross Bucks)



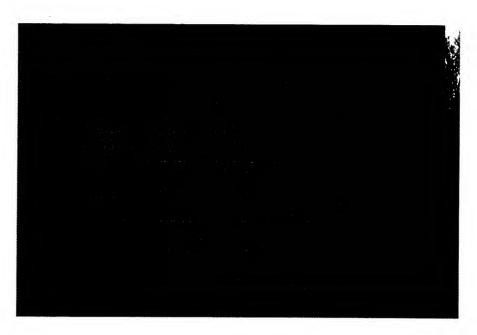
5. Traditional Carriage House Doors with Sliding Door Panels and Cross Bucks

Exhibit 3

Examples of Conventional Steel Raised-Panel Garage Doors

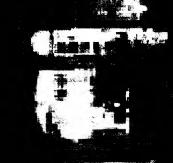


1. Conventional Metal Sectional Overhead Garage Door (Emphasis is horizontal; no attempt to simulate pairs of swinging doors)



2. Another Conventional Metal Sectional Overhead Garage Door (Note 4-panel construction)



















## An obsessive attention to detail in design and construction.

In Mt. Hope, Chio, Amish craftsmen hand-build some of the finest wood garage doors in the world expressly for your home. The Wayne-Dalton Series 7000 doors combine the convenience of standard sectional garage doors with the classic swing-open appearance and detailing of carriage house wood doors.

These doors are made with cross members and panels (rail and stile construction) from fine premium woods. Beading is milled into edges — a small detail often overlooked by others. Top section windows have true divided panes with authentic wood dividers (numins). And, of course, we finish thai merior surfaces of canels with genuine mahagany plywood for a more beautiful, tailored look.

## Better wood doors begin with better wood.

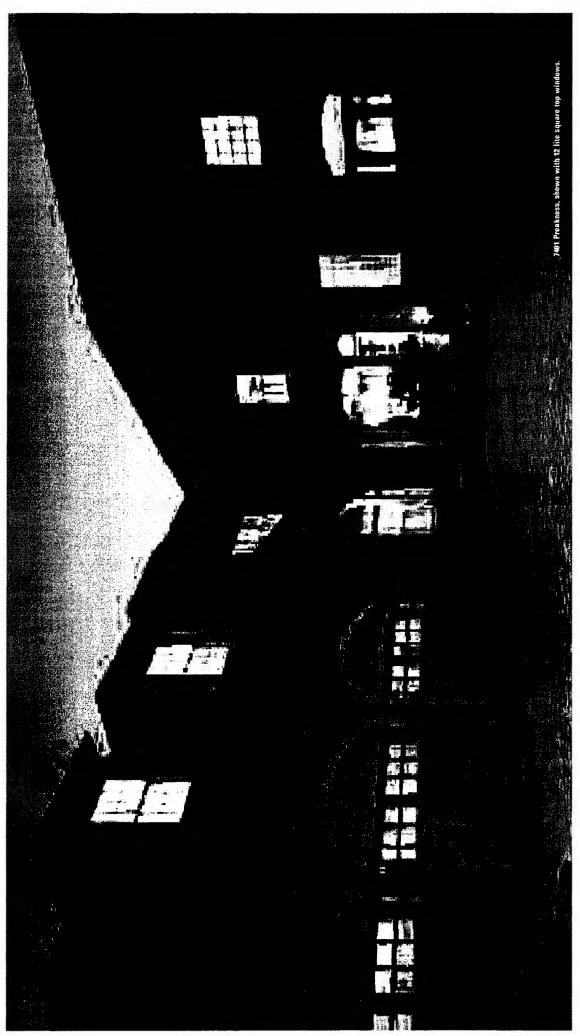
Wayne-Dalton is the only manufacturer to control the fine, premium woods from harvest through finished garage door. Because we manage moisture content, surfacing, machining and assembly, we know you'll get the finest wood door made.

We use a combination of premium visods in uur doors. Each is chosen because of natural characteristics. Strong, light hemiock makes a superb painting surface. Cedar, an excellent insulator, is highly resistant to rot and insects. Mahogany's tight, smooth grain, surface is very weather-resistant. Prigh-grade bouglas fir contains no painthes that can show through paint.





Carriage house style doors made with true rail and stile construction.



7400 DelMar

7402 Churchill 7401 Preakness

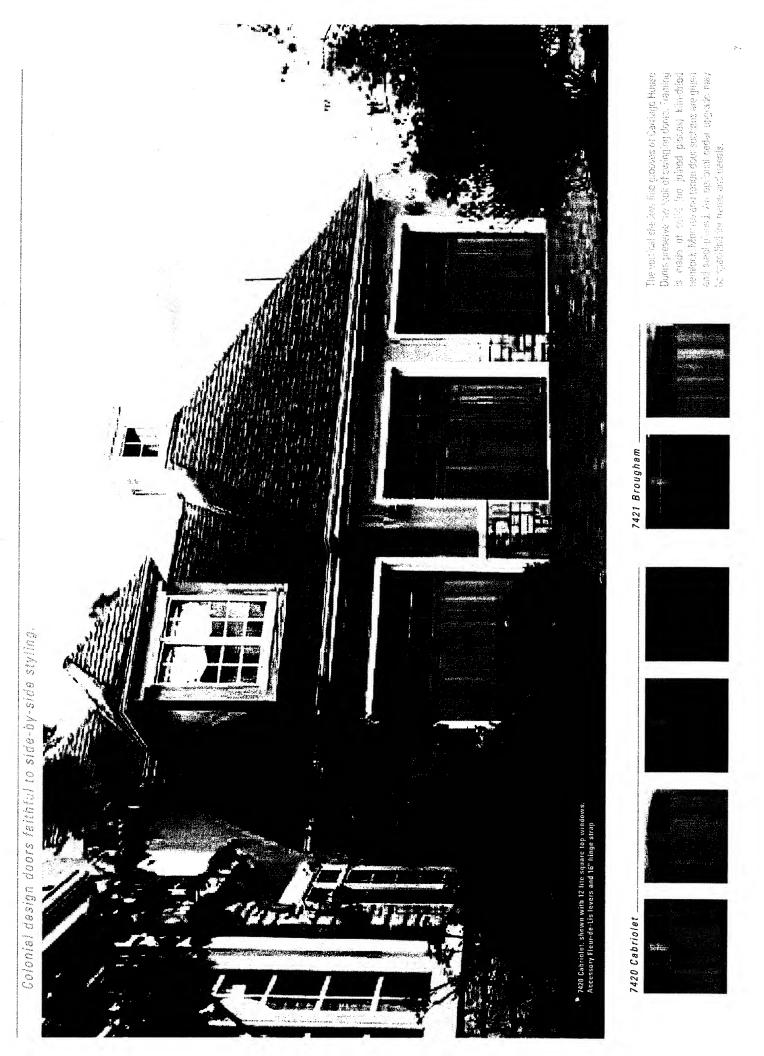


7411 Belmont 7410 Saratoga

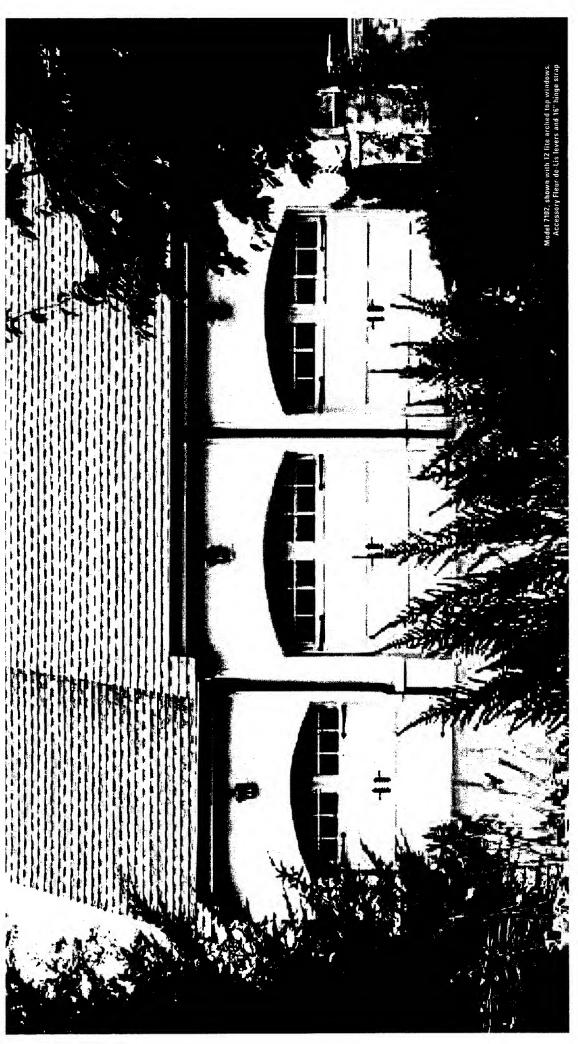


specie (poersy) Areferen sweedstoor of Bujors species for calificial the look of a custon swinging ubor, thear coder trin is applied in shight pineus before routing so the word's grain matches driven the full leggin of the dear. The france is blin-dried liganfoct with a polystylene insulation (100). You may specify your in when evolutionally included in the property of the control of t This plywood Consise on princh

Appropriate takes



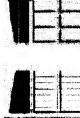
Handcrafted, finest quality, extraordinary beauty.

















the line dons. Framing of Madel 7100 Doors is Vin-died hemitook with munited edges. Panels are smooth mahegany with shiplap intertook between sections. (Fil panels on Markol 7102; hominot panels on Model 7105.) All surfaces are painted for paint. Model A custom look with many of the quality features found in our top-of-7105 is evalighe untilished for spaining.

Affordable carriage house look.

7001 Heritage B\* 7000 Heritage A\*

7002 Heritage C\*



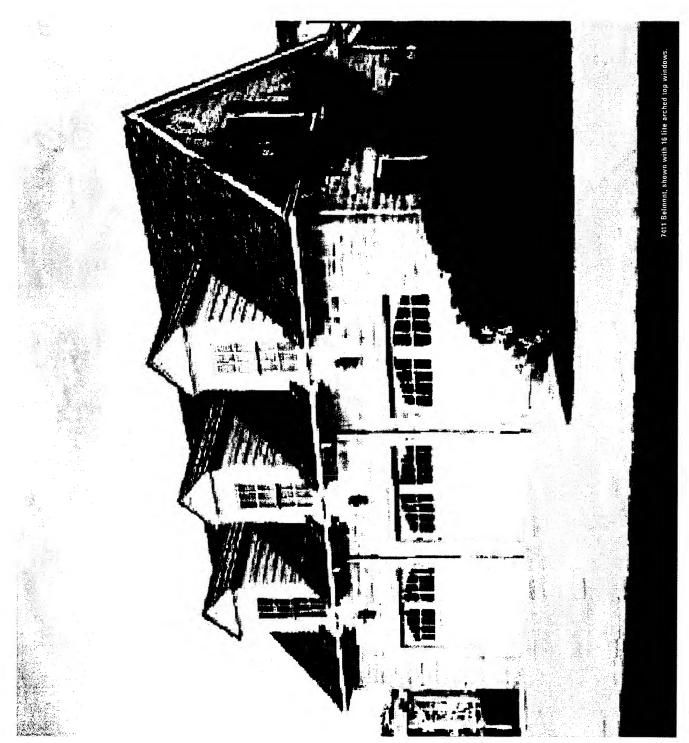
7003 Heritage D\*



7004 Heritage E\*

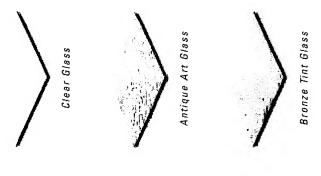


Hore is a quality which door both finil bas. These doors have hundred, or this traines. The is square-output pino that it gland and pinusd to panals. Bugged, besequing with pulysycense inculation rem. Door, one finished with herdinard his do and out. Engas, topt and rolling are standers on Moles 7006 cooks



Windows in Series 7000 doors are standard. They are true divided windows with individual panes of glass separated by one inch muntins, in addition to clear glass, you may specify gray finted, antique art or brass tint glass\* Shatterresistant Plexiglas\* is also available. Door may be ordered without glass, if you prefer.

Tubelais 2007, Heurage 8 and 2005 Haidage D. scralidda In Grenglass any

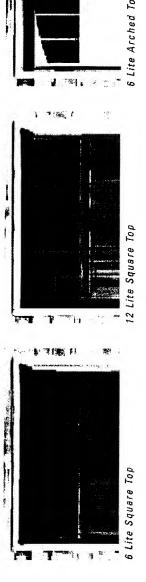




Gray Tint Glass

# Series 7000 Window Patterns

configurations. The number of individual panes will vary depending un dour aire and style. Single Series 7000 windows are evaliable in either traditional square trip or arched round top doors have 8 to 16 individual windows. Double car garage doors have up to 32 window panes. See your Wayne-Dalton Dealer for specific window patterns for your door.





	16 Lite Arched Top
	6 Lite Arched Top
	12 Lite Square Top
	6 Lite Square Top

	7400, 7401, 7402, 7410, 7411, 7412	7420, 7421	7101, 7102	7103	7104	7105	7000 Heritage A, 7001 Heritage B, 7002 Heritage C, 7003 Heritage D	7004 Heritage E
Door Construction								
Frame; 1-1/8° solid section	•						•	•
Frame: 1-3/8° stile & rall		•	•	•	•	•		
Exterior facing	MDO fir pkyvood; rough-sawn or smooth mahogany pkyvood; tongue-in-groove ceder; or, TI-11 pkyvood	Vertical grain hemlock with raised exterior or cedar upgrade	Smooth mahogany plywood or grooved MDO plywood upgrade	Graaved MBO piywood	Smooth mahogany plywood or grooved MDO plywood upgrade	Edge-glued hemiock, raised or flat cedar upgrade	§/8° hardboard	Ti-11 1/4" wide grooved, 4" or 8" on center
Paint grade finish	•	Hemiock only	•	•	•	•	•	•
Stain grade finish	Rough-sawn or smooth mahogany plywood or tongue-in-groove cedar	٠	•		Ѕтоот таһодапу ріумоод	٠	Rough sawn or smooth mahogany plywood	
Primed*			•	•	•	٠	•	٠
Polystyrene insulation	R-4.75						R-4.75	8-4.75
Counterbalance	Torsion Spring	Torsion Spring	Torsion Spring	Torsìon Spring	Torsion Spring	Torsion Spring	Torsion Spring	Torsion Spring

\*Factory primed doors available in some areas. Ask your dealer for details.

# The Perfect Way To Accent Your Garage Door

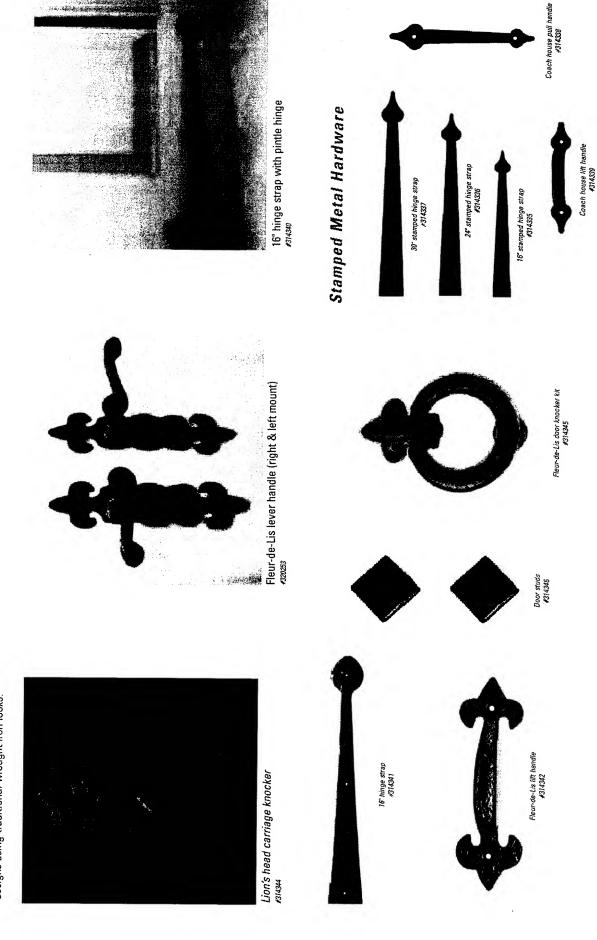
that faithfully recreates the appearance of Flaur-de-Lis design or the elegant coach house pattern, Each piece is finely detailed for historical accuracy with a hand-hammered look Optional accessories are evallable in classic traditional swing-style carriage house doors.

### ,--

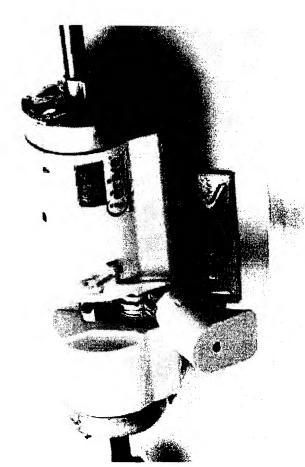
## Wood Door Accessories

### Black wrought iron

Blacksmiths chose to work in wrought iron because it resists corrosion far better than ordinary steel. Prime examples admired today are often centuries old. Wayne-Dalton has created classic designs using traditional wrought iron looks.



# idrive® Garage Door Opener mounts on the wall, not on the ceiling.



# The remarkable innovative idrive® opener.

By mounting idlive on the wall above your door, we're able to eliminate the belts, chain, screw drive and track that clurter your garage ceiting. That means less noise and vibration are transferred to adjoining living areas. According to independent tests, (drive is quieter than any chain drive opener you can buy.

- No overhead clutter
- Quieter than any chain drive opener
- No infrared safety sensors required\*
- Life of Home warranty
- " whon used with pinch-resissant sucre

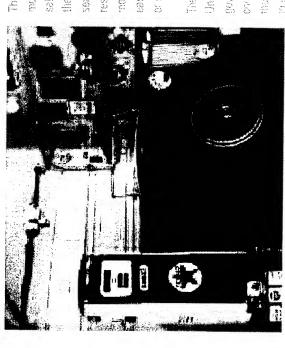
Wireless multi-function wall unit

2 keychain visor remotes



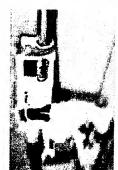


The most ingenious opener design ever!



The idnive's inferoprocessor continuously measures salety system. It can sense an obstruction anywhere on novement uniting the door and opener into a single the door, in effect, it turns your entire door into a safety sensing mechanism, it's sensitive enough to detect resistance as gentle as a roll of paper towels, It's much nore reliable than infrared safety sensors which can be easily knocked out of alignment by a wayward tricycle

Underwriters Laboratories emended its regulations governing openers to include this type of system, When The revolutionary idrive safety system is so affective that emplined with our pinch-resistant Model 9700 doors, it's the only garage door and opener system in the category o sam ne USZS lichig



One in ten home burglaries occur when home's garage. Most openers rely on the intruder forces entry through the the back force of the motor to resist forced opening of the door - but it strong security arm to mechanically determined burglar. We added a may not be enough to thwart a

programmable pet opening feature. It pet can come and go at will – while safely limiting access to your garage. partially open (from 6" to 30") so your idrive Garage Door Opener has a allows you to leave your door



## For every type of spring system

### Torsion Springs



Designed for any sectional wood or steel springs. Look for exposed springs coiled garage door that uses traditional torsion around a steel bar.

### **Extension Springs**





Designed for Wayne-Dalton or other sectional wood or steel door with extension springs using a special conversion kit.

### Torque Master\*





TorqueMaster counterbalance system. Look for a sealed tube with springs inside. pinch-resistant steel doors equipped with Engineered to work on Wayne-Dalton

.

# Quantum opener means power.

Quantum is a traditional chain drive opener that's loaded with extra features. The system self-monitors its electronics every time you operate the door to detect and currect problems before they happen, it even reconnects automatically after you've used the emorgenity release.

- Durable 1/2 hp motor
- Durable all-steel track
- · Cotional wireless multi-function wall station
- Security light with 4-minute delay
- Rolling access codes for security
- Wall unit and safety sensors available in traditional wired versions



Optional wireless multi-function wall station

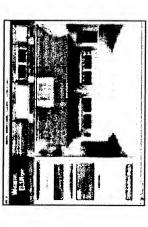
Optional wireless keyless entry pad





# Make it a total Wayne-Dalton system

## Visit Our Door Selection Center



www.wayne-dalton.com to select the door Visit our online Door Selection Center at style and options best for your home.

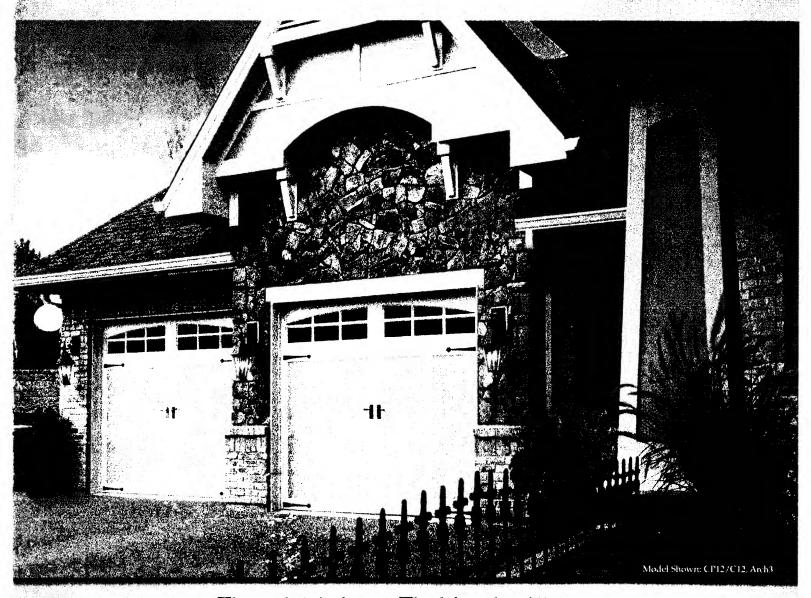
ACAMBET SANATAN AMBATAN ALDARAH APALISI BARDAR ALAMBATAN KAMBATAN AMBATAN BARTAN BARTAN AMBATAN BARTAN BART 

888-827-DOOR • www.wayne-dalton.com • One Door Drive • PO Box 67 • Mt. Hope, Ohio 44660 • ©2005 Wayne-Dalton Corp. • Item 306067 3/05

ONE FIRST AFTER ANOTHER"

Exhibit 5A





The style? A classic. The lifestyle? All you.



America's Favorite Garage Doors\*



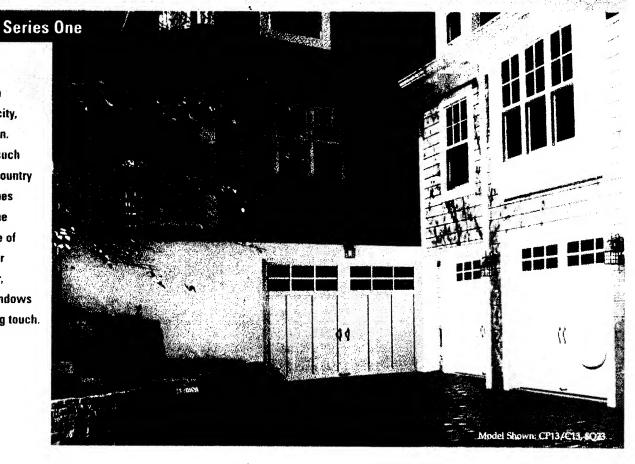
)

Model CP12/C12 SQ23 8', 9' wide

Model CP12/C12 SQ23 10', 12' wide

Model CP12/C12 SQ23 16', 18' wide

in the
Coachman Collection
proves that in simplicity,
there is sophistication.
Architectural styles such
as mission, Shaker, country
and prairie-style homes
look beautiful with the
understated elegance of
this classic look. Your
choice of rectangular,
square, or arched windows
provides that finishing touch.



	Solid	Arch1 (Solid)	Arch3 Window	Arch4 Window	SO23 Window	SQ24 Window	Rec13 Window	Rec14 Window
Model CP11/C11			and the second	のファ朝 海にの山 田子の田 書と祝書	Man - Law Serie - Series and - Man Series - A Annu	第302 様 紀1. 発展 数との機 数1. 発展	異在圖 蜀安昌	<b>東</b> 李波蘭 第六編章
Model CP12/C12			THE THE PARTY AND	では、 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは 動いでは のいで のいでは のいで のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいで のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のいでは のい	聯心 編 統作 蘇州 編 熟 多離	養自以養 解心協議 等在出權 等二級權		<b>第</b> 章 <b>第</b> 章
odel 3/C13			(1997年) (1997	we the 保護 職的 Manage 機能の機能の機能	<b>2008</b>	職疾心療 複之装體 春冬促養 朝永營曆		

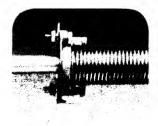
### **Base Door Colors**

WHITE.

**ALMOND** 

### SANDTONE

'overlay available in white only



### **Galvanized Torsion Spring**

Corrosion-resistant, long-lasting galvanized torsion springs offer up to a 50% longer cycle life than industry standard springs.

Dies to some might and very prince destrous, ser all product officialism in tide galvanised soungs. Extending springs de our durindigalvaniged wire.

### Construction

- Four layers (steel + insulation + steel + composite overlay).
- Available with 1½" ("C" Models) or 2" ("CP" Models) polystyrene insulation with thermal break for superior insulation value: 1½" 6.5 R-value, 2" 9.0 R-value.
- Commercial grade 14-gauge steel hinges for long-lasting performance
- · High-cycle nylon rollers for quiet operation.
- · Longer-life galvanized torsion springs.
- · Rustproof, aluminum-bottom weatherseal retainer.

### Style and Finish

- . Three design series, eleven models.
- · Natural woodgrain texture.
- Three hot-dipped galvanized steel base door colors white, almond and sandtone
- · White custom composite overlay with coped edge.
- Can be painted using a high quality exterior latex paint.
   Do not paint base door (steel) in colors with a Light Reflective Value (LRV) of less than 38. The overlay (vinyl) should not be painted with an LRV of less than 56. See illustration at right. Contact paint manufacturer for LRV reading.
- Arched, square or rectangular windows in Series
  One and Two available in single pane or obscure
  glass. Insulated windows are available as an option
  on "CP" models.
- · Solid arched or square top sections in all series.
- WindCode \*: 1 ½ " C" Models are available up through W5 WindCode and 2" "CP" models are available in W6 WindCode. Some restrictions apply. See your Clopay ProSeries dealer for details.
- Special designs and sizes are available. See your Clopay ProSeries dealer for details.

### **Coachman Collection Size Availability**

Available in 6'6", 7'0", 7'6", 8'0", 8'6", 9", 9'6", 10" heights.

To knee details and a face of special end of the found for a g

	Model Numbers	
Door Width	CP11/C11, CP12/C12, CP11/C13, CP21/C21, CP31/C31, CP32/C32, CP33/C33	CP22/22, CP23/C23, CP34/04, CP35/C35
8	X	X
3.	X	X
10"	х	
12"	X	
16'	X	Х
18'	Х	Х

As hearty are as one and executive as far 32 segue













America's Favorité Garage Disors'



Model CP21/C21 SQ24 16', 18' wide

Model CP21/C21 SQ24 8', 9' wide Model CP21/C21 SQ24 10', 12' wide

### Series Two

of the Coachman **Collection complements** homes with American country flair. With full or half-cross buck panels and your choice of rectangular, square or arched window styles, it's a classic style that looks as good with Irish country pine as it does with Texas Hill Country chic.



	Solid	Arch1 (Solid)	Arch3 Window	Arch4 Window	SO23 Window	SO24 Window	Rec13 Window	Rec14 Window
Model CP21/C21			And So. And Social States	から 株 付 分類	報が、30回 行う (機) 報か、作品 200 / (機)	解し、2分類 あり 洗慮 素を引着 (数一対震	<b>K Z B Z</b>	<b>基本中國 第</b> 个注 <b>目</b>
Model CP22/C22			如"一碗"的"~~ 便一般好品面	melonial (本 Nume <b>表</b> 示 文章 教 Too 董	MEST COS POLICIONS	新日上版 安广河鄉 新市《柳 郑小台鄉	篇: 獨 答:s <b>值</b>	· 表示证据 第二位
odel 3/C23			が 2種 2位 2 種	のよう (M)	新なり - 高金 製金 子 <b>(1)</b> 発発させ <b>決定 力</b> なり 力 <b>(1)</b>	調での4番 株式の番 装むに乗 投作扱書	<b>数 编 约</b> 通	<b>8</b> 83 <b>8 8</b> 0 <b>3</b>



Model CP31/C31 Arch 16', 18' wide

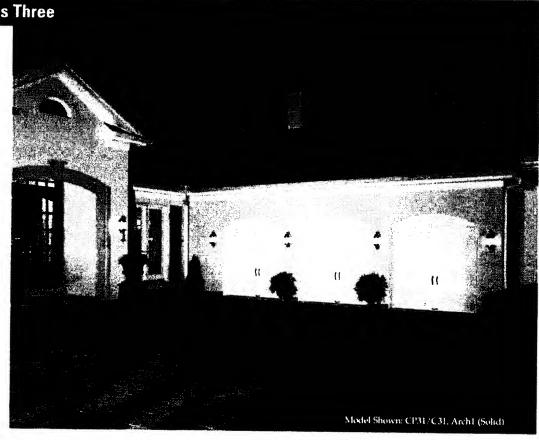
Model CP31/C31 Arch 8', 9' wide

11

Model CP31/C31 Arch 10', 12' wide

### **Series Three**

of the **Coachman Collection** delivers solid good looks, designed to work exceptionally well with today's country French and Victorian style homes. Fully enclosed to provide maximum privacy, with optional cross buck bottom panels and square or arched top sections, this series is the architect's choice for a variety of home styles.



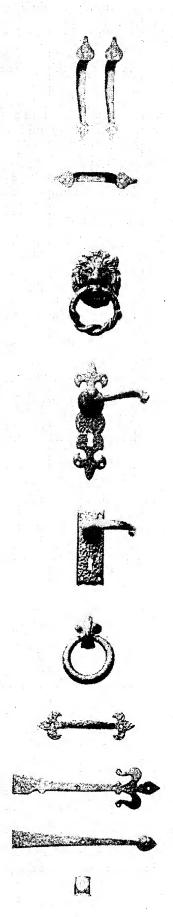
Arch I (Solid) Arch1 (Solid) Arch1 (Solid) Solid Solid Solid

### Black Iron Hardware



### The Coachman Collection from Clopay

gives your home classic elegance, created for today's active lifestyle. With three distinctive series crafted to complement your home's architectural style, the Coachman Collection offers the sophisticated expression of a carriage house door with the science of durable steel and composite construction. The result is a classic look that's virtually maintenance-free. It's the perfect blend of beauty and practicality—masterful in the details and innovative in design—and it's only from Clopay.



### Exhibit 5B

### JELDWEN.

### **COMPOSITE GARAGE DOORS**

Traditional, Carriage House and Estate Series



### RELIABILITY for real life®

### JELD-WEN has been the world leader in composite technology for over thirty years

JELD-WEN garage doors are the result of unsurpassed technology, uncompromising ethics, and dedication to providing exactly what the customer needs.

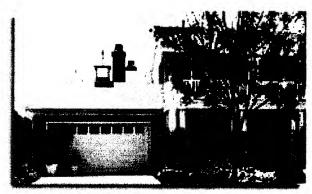
JELD-WEN's composite garage doors provide a valuable answer for homeowners who want the elegance of wood without the maintenance, the strength of steel without the potential for rusting or denting, and the durability of fiberglass without the cost.



#45A



#438



#1 Short Panel with short panel window

Front cover photo: #86 with clavos and knockers



Strong
 The extra-wide LVL laminated support rails give JELD-WEN garage doors the strongest structural support in the industry.
 All surfaces are bonded with waterproof catalyzed glue.

Energy Efficient
 Packed with environmentally safe,
 CFC-free, expanded polystyrene
 insulation. Stable, no loss of R-value
 over time.

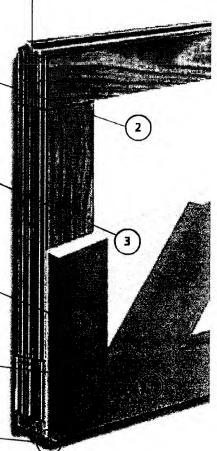
3. Super Skin
Thermal set melamine resins
combined with refined cellulose fibers
create an exterior door skin that
is virtually impervious to moisture,
cracking, rotting, sub-zero freezing,
desert heat and the damaging effect
of the sun's ultra-violet rays.

4. Durable
The JELD-WEN Advanced Polymer
skin and trim boards won't crack,
split, separate, shrink, expand, rust or
dent. All the materials on the face of
the door are made in the same plant
and of the exact same materials. The
result is an incredibly durable exterior.

The rich look of wood
 A deep-definition, wood-grain
 pattern. Grain direction is correctly
 registered to simulate the texture
 of an actual wood door. Look
 closely and compare to steel doors.
 Composite is simply superior.

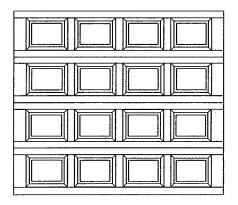
Perfect fit
 The JELD-WEN garage door can be trimmed at the job site for a perfect fit every time.

Conserves our natural resources JELD-WEN skins and trim boards are made of 100% recycled fiber. Comes primed and ready to paint.

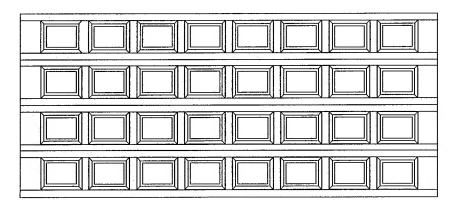


### TRADITIONAL SERIES

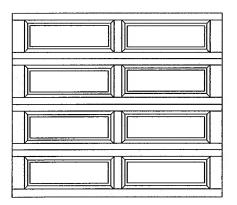
Featuring an Advanced Polymer Composite skin that will not dent, rust or delaminate. The Traditional Series is perfect for residences that want the classic multi-panel motif with numerous window options. Factory thermal-set primer allows the homeowner to exactly match the home's color selection. The Traditional Series is available in 8', 9', 16' and 18' widths, and heights beginning at 6'6" to whatever height you require, in increments of 6". Doors are 1-3/8" thick, completely packed with environmentally safe CFC expanded polystyrene. The inside is a flat, dust and dirt collection free, composite skin.



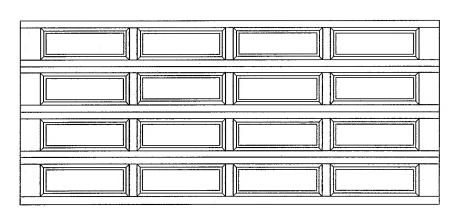
#1 Short Panel - Single Car



#1 Short Panel - Double Car



#2 Long Panel - Single Car

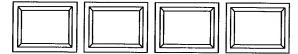


#2 Long Panel - Double Car

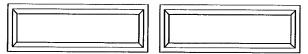
### WINDOW OPTIONS FOR TRADITIONAL SERIES

Every home has an appeal that can be enhanced with garage door windows that complement what the architect had in mind. One of these designs may be just what completes your home's curb appeal. Doors may be shipped open so you may select your own glass or glazed from the factory with 1/8" double strength glass.

### Windows

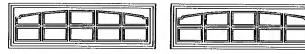


**Short Panel Window** 



Long Panel Window

### Window Inserts



Cascade Long Panel





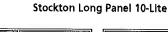
**Cascade Short Panel** 





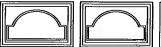






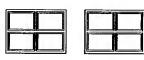


**Cathedral Long Panel** 













**Cathedral Short Panel** 

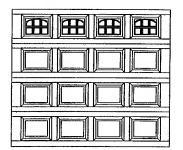
Stockton Short Panel



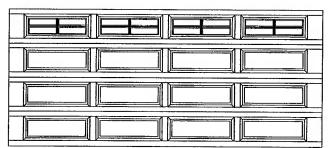


Sunburst 2-Piece

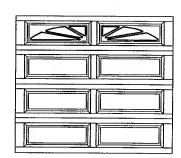
### **Examples**



#1 Door with **Cascade Short Panel** 



#2 Door with Stockton Long Panel 4-Lite



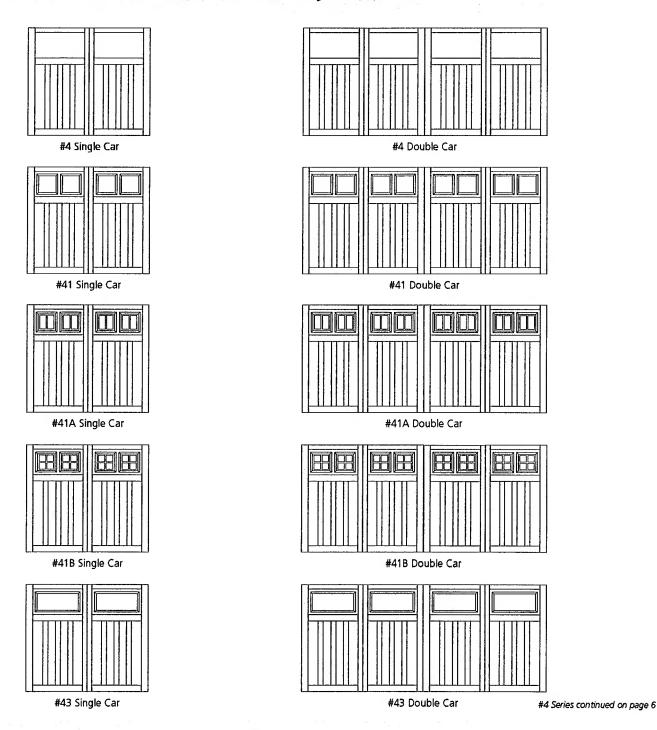
#2 Door with Sunburst 2-Piece

### CARRIAGE HOUSE DOORS - #4 Series

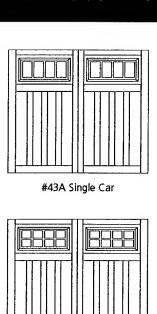
Architects have insisted for years that garage door manufacturers address the architectural need for "statement" doors that truly add to the beauty of classic home architecture. That door is the Carriage House door. JELD-WEN is proud to introduce the most authentic and durable carriage house doors ever designed.

What separates the JELD-WEN Composite garage door from ALL the others is the materials we use and how those materials create the door. The entire face of the door, regardless of design, is made from the exact same material and made in the same plant. Each component is cut and assembled by hand - no shortcuts. The materials are bonded for life and, being all the same material, the JELD-WEN door has exceptional resistance to dry desert heat or the frigid winter temperatures.

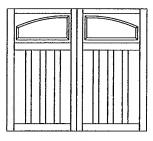
In Carriage House Doors, appearance and durability are the critical elements and the JELD-WEN Carriage House door offers the best value on the market. Carriage House doors are available in widths of 8', 9', 10', 16' and 18' and heights of 7', 8', 9' and 10'.



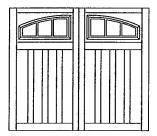
### CARRIAGE HOUSE DOORS - #4 Series



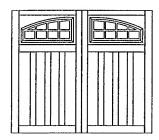
#43B Single Car



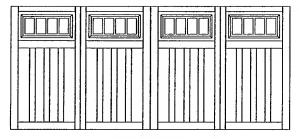
#45 Single Car



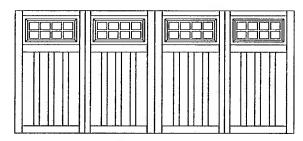
#45A Single Car



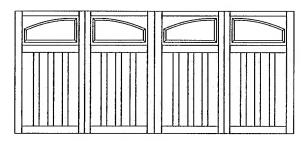
#45B Single Car



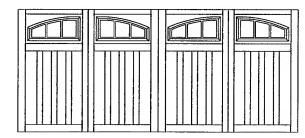
#43A Double Car



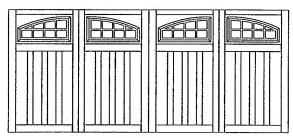
#43B Double Car



#45 Double Car

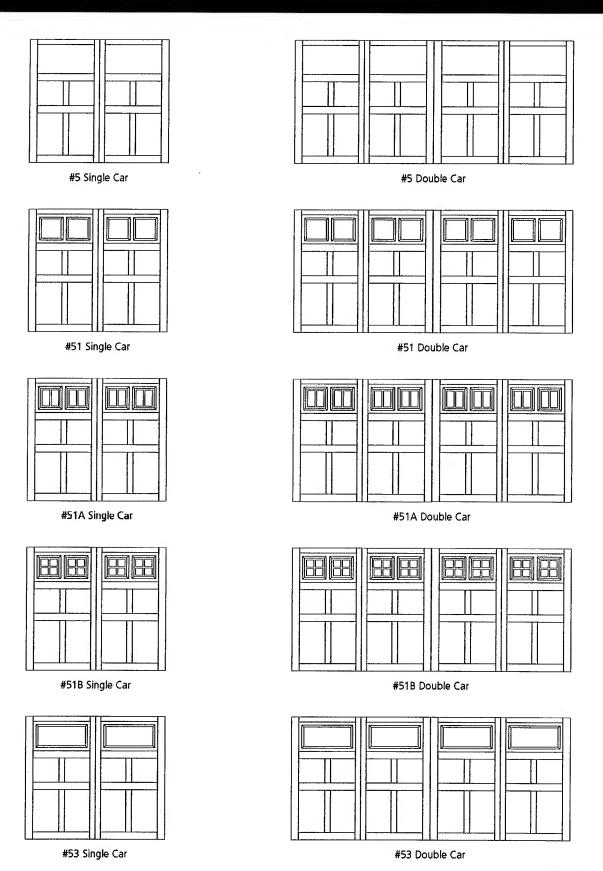


#45A Double Car



#45B Double Car

### CARRIAGE HOUSE DOORS - #5 Series

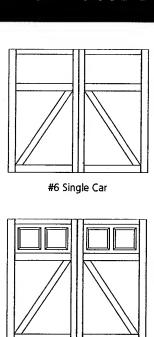


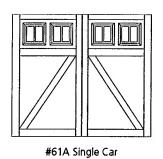
#5 Series continued on page 8

### CARRIAGE HOUSE DOORS - #5 Series

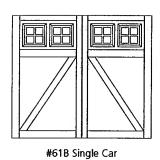


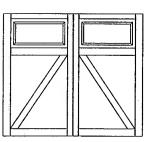
### CARRIAGE HOUSE DOORS - #6 Series



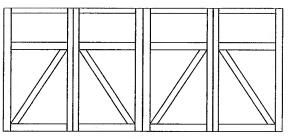


#61 Single Car

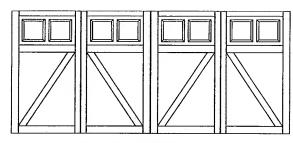




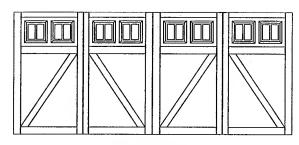




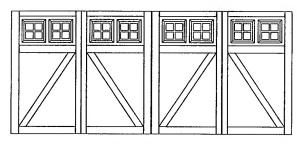
#6 Double Car



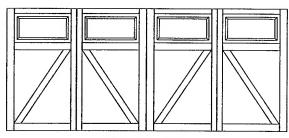
#61 Double Car



#61A Double Car

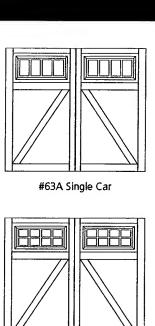


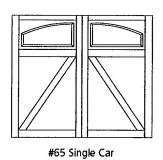
#61B Double Car



#63 Double Car

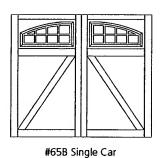
### CARRIAGE HOUSE DOORS - #6 Series

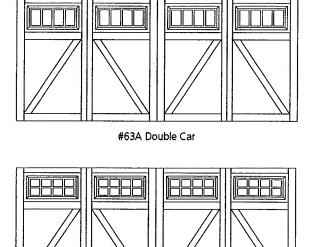


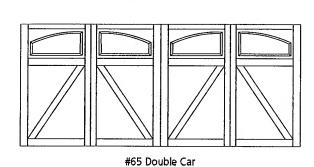


#63B Single Car

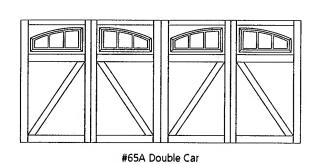


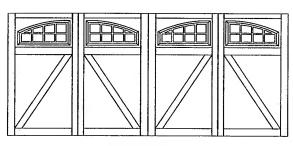






#63B Double Car

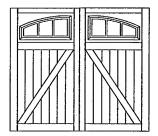




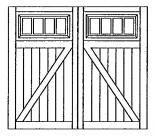
### THE "GROOVE" OPTION FOR CARRIAGE HOUSE DOORS

For the authentic plank look in our Carriage House doors, grooves can be added. To accomplish this, the exterior skin thickness is increased to accommodate the grooves. The grooves are 6" on-center. This option is available on the #5 and #6 doors. Examples are shown below.

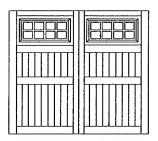
### **Examples**



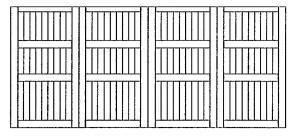
#65A Single Car with Grooves



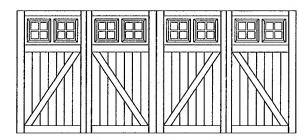
#63A Single Car with Grooves



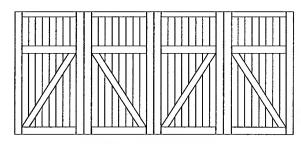
#53B Single Car with Grooves



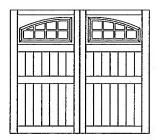
#5 Double Car with Grooves



#61B Double Car with Grooves



#6 Double Car with Grooves

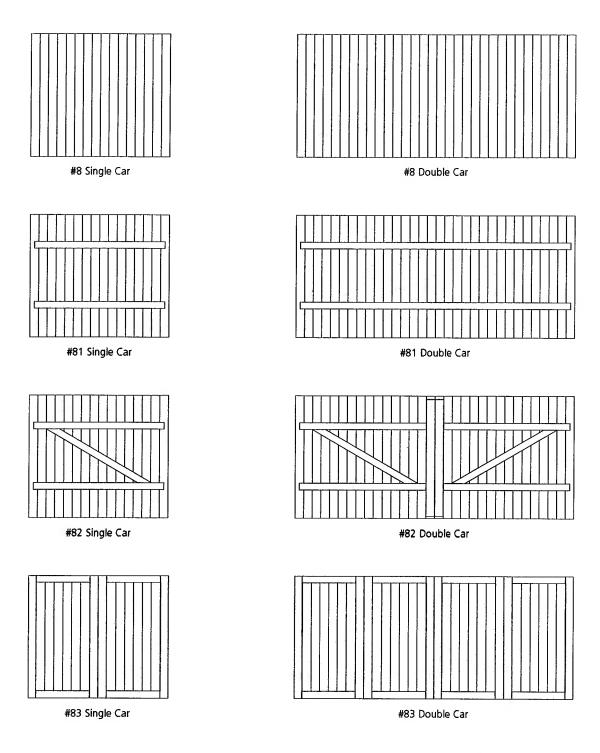


#55B Single Car with Grooves

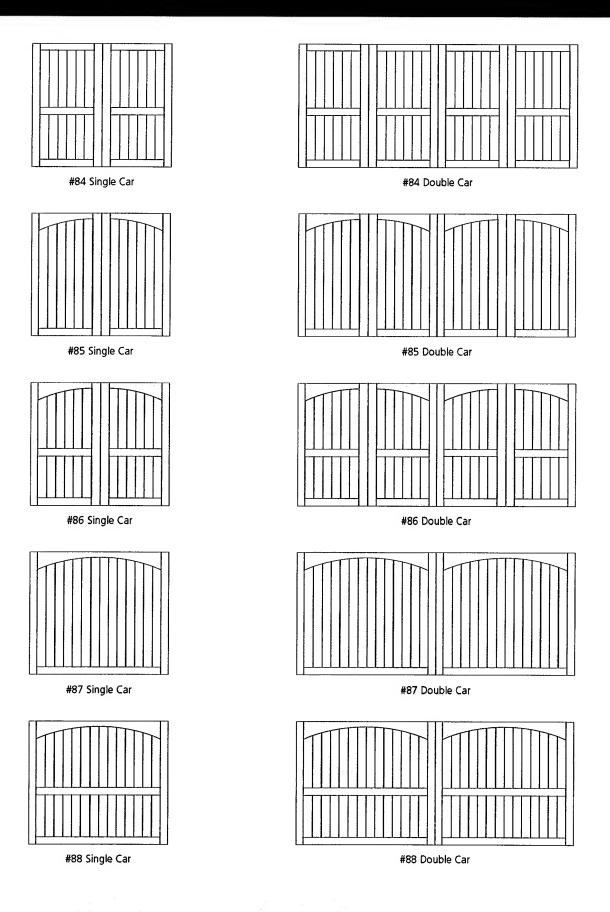
## ESTATE SERIES

Completing the Carriage House "look", the Estate Series adds 6° on center grooves in our molded polymer skin. The grooves exactly replicate the multi-plank doors of Mediterranean and turn of the century designs. Modern technology has allowed JELD-WEN to create door fronts that duplicate real wood grain patterns. Like the Carriage House Series, the entire face of the door is created out of the same material, with exceptional weather resistant properties.

Estate Series doors are available in widths of 8', 9', 10', 16' and 18' and heights of 7', 8', 9' and 10'.

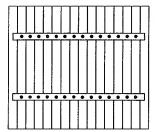


## ESTATE SERIES

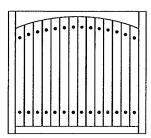


## DRESSING UP WITH HARDWARE

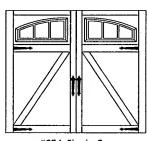
The ultimate in "statement" garage doors is a JELD-WEN door with decorative hardware. JELD-WEN offers round clavos, door knockers, strap hinges and door handles. What a difference hardware adds. Below we have shown a few ideas. Create and personalize your own design with the hardware shown on page 14. Hardware is sold in packaged sets.



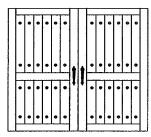
#81 Single Car with Clavos



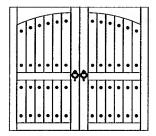
#87 Single Car with Clavos



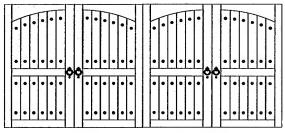
#65A Single Car with 16" Straps and Handles



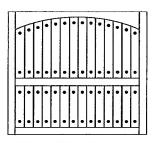
#84 Single Car with Clavos and Handles



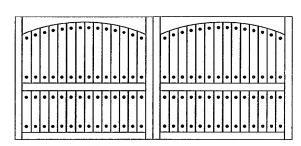
#86 Single Car with Clavos and Knockers



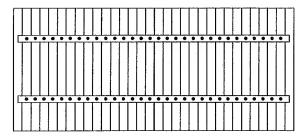
#86 Double Car with Clavos and Knockers



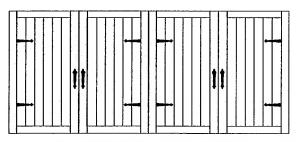
#88 Single Car with Clavos



#88 Double Car with Clavos

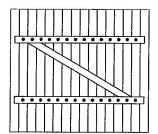


#81 Double Car with Clavos



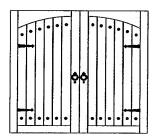
#83 Double Car with 16" Straps and Handles

## DRESSING UP WITH HARDWARE

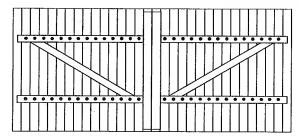




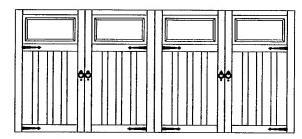
#83 Single Car with 16" Straps and Handles



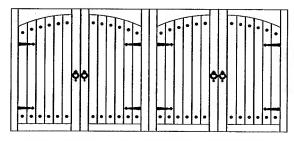
#85 Single Car with Clavos, 16" Straps and Knockers



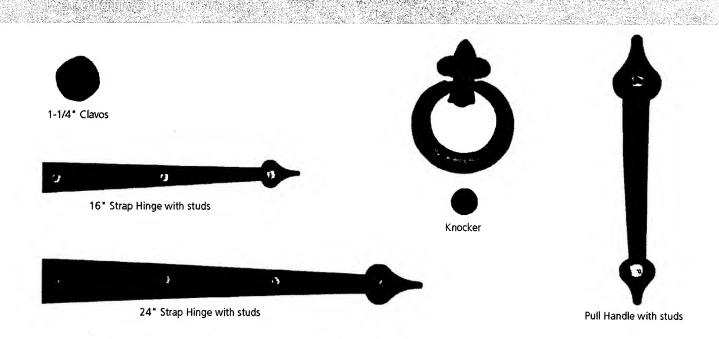
#82 Double Car with Clavos



#43 Double Car with 16" Straps and Knockers



#85 Double Car with Clavos, 16" Straps and Knockers







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The JELD-WEN Web site is your ultimate resource for learning about our reliable windows and doors. It has all the product information, sizes and specifications you need to make the best choice for a home. Visit us today at **www.jeld-wen.com** 

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- Five year limited warranty on Carriage House and Estate Series.
- For installation, general specifications, warranty, and finishing instructions go to www.jeld-wen.com



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Our Garage Doors withstand the ASTM (American Society For Testing Materials)
ACCELERATED WEATHER TEST



Hour 1:

Submerged in 120° F water



Hours 2-4:

Exposed to 200° F steam and water vapor



Hours 5-24:

Frozen at 10° F



Hours 25-27:

Baked at 210° F



Hours 28-30:

Exposed to 200° F steam and water vapor



Hours 31-48:

Baked at 210° F

if that's not brutal enough . . . the whole process is repeated FIVE MORE times

that's TOUGH!



#45A



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SB 10M 6/05 10-499

JELD WEN.

## **Specialty Market 'Opens the Door' to Success**

High-end custom garage doors are a successful niche for Minneapolis-area Designer Doors Inc.

#### By Helen Kuhl

As part owner of a typical steel garage door company, Kent Forsland discovered that he had more interest in the old-fashioned wooden garage doors he sometimes was replacing than in the modern assembly-line doors he was producing. Impressed by the quality and beauty of doors in yesteryear's homes, Forsland really enjoyed the occasional order for a custom-built wooden door, either reproducing the original in a home being renovated or matching the style in an expensive new home.

Pursuing his interests and taking the chance that there would be enough customers who would appreciate a high-end wood garage door, Forsland started Designer Doors Inc. In Minneapolis in 1992. He began building doors in his backyard with the help of a couple of employees. Business grew steadily, and production eventually moved out of Forsland's yard and into a new 20,000-square-foot facility in River Falls, WI, just across the river from Minneapolis. Today, with 20 employees, close to \$2 million in annual sales and an expansion into a nationwide market, the company appears to be fulfilling Forsland's dreams.

"It's very much a small niche, but it's a fun niche to work in because our customers are wealthy and we can talk about things other than just the price of the doors," Forsland said. "We can discuss with them what matches their home, and they appreciate our product."

Wood garage doors have had a negative image among many homeowners, because of the poor-quality doors that were typical in the 1970s and 1980s, said Stacy Nichols, administrative manager. "They used cheap wood or clad wood and the wood rotted through. Or they would glue or staple an overlay onto an 1Ú8-inch substrate and after a few years the staples would start to pull out or the glue would not hold as well," she said.

Designer Doors offers customers the convenience of having modern overhead doors that can be raised using automatic openers while it emulates the quality of wooden doors built in the early 20th century, which were made of high-quality wood and well-constructed, Nichols said.

"The old doors were made of great quality wood, which really has an important effect on how long the door is going to last. And they had a beautiful grain," Nichols said. "They also had all the little touches, like true divided lites and 'weep' holes. We do all that in our doors, too."

Weep holes are small holes drilled at an angle into the backs of the doors to allow water a place to leave the center. That way, condensation can escape so the door does not rot from the inside out, she said. "We offer a limited lifetime warranty that the wood is not going to rot through on our doors," she added. "And it's things like weep holes that help our doors last as long as good doors used to."

Designer Doors uses Douglas fir for the framework and cedar for panels and overlay materials. "Cedar weathers nicely, it is a beautifully grained wood and it really can stand up to wear. That is what our warranty is based on. And the Douglas fir gives the door its strength and stability, so we are not going to have sagging or warping," Nichols said.

Forsland has developed several methods for garage door construction that are patented, Nichols added. One of his patents involves using an internal framework for the doors. The framework, which is about 11Ú2 inches thick, is on the inside. There is a plywood back panel ("to give the door a little more of a finished look"), plus insulation, and then another cedar layer is put on top.

A typical double-wide Designer Doors door is about 31Ú2 inches thick and weighs about 750 pounds. "This internal framework allows us creativity in styling, because we can have various decorative elements on the surface. The internal framework style door is called our Vintage Door, and we use it to create a lot of different looks," Nichols said.

"What you see on typical wood garage doors is every panel contained in kind of a picture frame, because the framework of the door is at the surface," she added. "We do panel doors, too, but we use only top-quality wood and they are hand-crafted. We still build them one at a time."

Nichols said that each door is custom-built to the exact opening. Forsland also holds patents for some of his unique door styles, such as a double-wide door that looks like two single-wide doors, and doors with three-dimensional details, such as false posts.

"We are particularly proud of some of the things we have done that are innovative," Forsland said. "It's fun, in an old industry like garage doors, to actually have patents on new ideas."

Having the framework on the inside also gives Designer Doors a lot of flexibility in adding lites (individual window panes) anywhere on the door. The company can custom shape the lites, often matching the curves of the garage door opening or the style and placement of windows in the home.

The company also strives to obtain the highest quality hardware it can find, which is especially important given the weight of its doors. It also adds as many safety devices as it can find, such as automatic backup systems, to avoid any possibility of malfunction, Nichols said. "We tell our customers that their doors are going to last for 50 years," she said. "So we really think long-term. We want to be stable and be around."

For the first three years or so, the company built its success in its local Minneapolis market, working with homeowners, architects and designers on high-end homes in the \$1-million-and-up range. It opened a small showroom in the city's International Market Square and did little additional marketing besides exhibiting at the annual meeting of the American Institute of Architects' Minnesota chapter.

It was when a national architect's show was held in Minneapolis in 1996, and Forsland decided to exhibit there instead of at the local event, that the company began to expand beyond its regional area.

"We had heard that about 50 percent of the attendance at the national show would be Minneapolis architects, and the national show offered three days of exhibit time instead of the five hours allotted at the local chapter's event," Nichols said. "So it seemed like we could reach our Minnesota architects for a longer period of time by going to the national show. We did that, and the 50 percent of attendees from outside Minnesota were excited about our doors, too. They liked being able to offer customers a little more variety. Architects who do a lot of remodeling especially liked being able to offer something similar in style to what was already on the home."

As leads started to come in from across the country, Forsland decided to expand to a national level. While he kept the Minneapolis showroom, he relocated to the River Falls facility, which also has a showroom. And he did some advertising in Old House Journal and Fine Homebuilding, both national publications.

Moving to a national market brought some growing pains, however. The company tried instituting a dealer program, but ran into communication problems so that it pretty much has abandoned the idea now, Forsland said.

"I didn't realize just how critical communication is," he said. "When we started, I talked to the customer and I talked to the guys who built the door, and communication was simple and it flowed through. I kind of knew the customer's mind and I could make little decisions that had to be made on the shop floor. When we had salespeople taking an order, which would then go through an expediter and then onto the shop floor and out into the field, the communication fell apart. Little things that the customer would say, the dealer didn't pick up on. So they didn't get put on paper and that little detail didn't get built."

The company now works with its own sales force, having added a showroom and sales person in Chicago,

who comes to the plant for frequent training. While there are still communication "bugs" to be worked out, Forsland said that he still is intent on expanding. "We feel that there is a sufficient market nationwide," he said. "The challenge is figuring out how to communicate with a national customer and meet his expectations and still make money at it."

Expanding to a national market is important to the company's growth because the doors are expensive and require a wealthier clientele. "A lot of people who are interested in our doors see the price tag and throw their hands up in horror," Nichols said. "But our doors are very labor-intensive; they are built one at a time and take anywhere from 25 to 125 hours or more to produce. So they are expensive.

"Panel doors can range anywhere from \$1,200 for a single-wide, for a start," she added. "I think the most expensive double-wide door that I've ever priced out was over \$6,000. Of course, our pricing does include the hardware and installation. We try to be as full-service as possible."

Designer Doors uses tongue-and-groove V-grooved cedar for its panels to give the wood room to expand and reduce stress, Nichols said. Doors are built from start to finish by a team, which can be two to five woodworkers, depending on the complexity of the design. All doors are put onto a rack and inspected carefully before they are delivered.

Shop equipment is basic, including a table saw, radial arm saw and shapers from Delta and a Timesavers widebelt sander. The company has a finishing room, but little finishing is done beyond priming, and it is all done by hand. The company does some of its own finishing in the Minneapolis area. But it prefers for the onsite contractor to handle it when the door is being shipped out of the area, because it is so hard to keep the finish from being damaged during shipment, Nichols said.

However, the company makes very specific recommendations about which finishes should be used and tries to be involved in the customer's decisions to ensure that the door is well protected against the elements. It recommends using either a three-step stain-and-finish process from Sikkens or a Natural Seal product. It advises against using polyurethane or marine varnish, because they don't allow moisture inside the wood to escape and a door will rot from the inside, Nichols said.

"We want customers to be happy with their door for a really long time. And putting a wrong finish on it can kind of ruin the experience for them," she said. "We rely a lot on word-of-mouth. So it's really important to us that everybody walks away happy."

Despite the finish limitations, Designer Doors strives to build anything a customer wants in a garage door and enjoys the challenge of pushing its technical limits and coming up with something that works.

"We have a very good understanding of what's do-able and what's not. I guess that comes from having done a lot of garage doors," Forsland said. "We have seen the outside limits of what works. So when we start getting close to those limits, all these antennae start going up and we find a better way to do things."

Although Forsland faces engineering challenges and expansion headaches, he is excited about his company's prospects. "On the days where you get 'beat up' by things that didn't go right, I think about talking to a customer who just loves his doors, and it allows me to go on and figure out how to get around the other stuff," he said. "Our customers are a good bunch of people to work with, and it really is fun."

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Today, garage doors are as much about style as function, and consumers have hundreds of choices.

"The garage door is now treated like the front door of your home," said Wright, company president. "It should complement and enhance your home's appearance."

On attached garages that face the street, a garage door can make or break a home's curb appeal. That's the reason consumers are increasingly choosing doors with features matching the style of their home, whether it be a colonial, Tudor, Craftsman bungalow, Italianate or four-square.

A custom-made look can come at a high price -- \$10,000 or more for a doublewide door, including installation. But there's also a steady market for the basic, insulated, doublewide steel door, which starts around \$1,000. And for those who want a custom-made look with the basic price tag, there are options, too.

Some handy homeowners and clever contractors have learned how to customize standard cedar doors -- a single door costs around \$1,000 -- by adding decorative details such as windows, wood rails and molding. That was the approach Susan and Doug McNair of Freeport chose two years ago when they were building a Frank Lloyd Wright-inspired arts and crafts-style home.

The four-car detached garage was designed to look like a carriage house. With every detail of the home true to the style, "the only thing to do was custom," Susan said.

Instead, the couple's contractor, Leroy James of GBL Builders in Harmony, added

cedar trim to four single cedar doors and cut and installed windows that matched those on the house. As a result, the McNairs now have authentic looking arts and crafts-style garage doors at a fraction of the cost of custom-made.

Homeowners' demand for detail, tradition and distinctive design features has prompted manufacturers of standard steel doors to expand their product lines. Two industry leaders, Raynor and Clopay, have added upscale premium lines in the past few years.

Raynor, based in Dixon, Ill., has its Masterpiece series, which boasts an array of style options, including five color choices or a wood-grain finish and several panel designs and window styles. The company's Web site, <a href="http://www.raynor.com/">http://www.raynor.com/</a>, even offers consumers a chance to experiment with different options and design their own garage door. You might try a colonial panel with "sunburst" windows, for example, or a raised panel with "Ranch Elegance" beveled windows.

Clopay, for its part, has many design options in its Premium series, including windows with a leaded, beveled or stained-glass look. The windows are actually made of acrylic, for safety and durability, and conveniently snap into the door. The windows can be coupled with panels in several different styles and dimensions. The designer acrylic inserts add about \$300 to the cost of the door. Insulated glass or structural upgrades such as double hinges can add \$100 to \$300. Clopay's Web site is http://www.clopay.com/.

Although steel remains the most popular material choice among consumers and contractors because of its durability and low maintenance, wood has made a comeback in recent years.

"There are older, established neighborhoods where my customers only want wood doors," said Wright. "And I've been installing wood doors in new construction as well. It offers more flexibility in painting and staining, which many people want."

That translates to more maintenance, however. Unlike steel, which never needs to be repainted, wood requires regular repainting and restaining. Wood doors are most commonly made from durable, rot-resistant cedar, with an average price of \$2,000 to \$3,000 for a doublewide door, including installation.

Clopay recently launched a high-end brand of custom-made wood doors in a variety of styles under the brand name of Holmes. The line offers overhead doors that resemble many historical carriage styles.

But the darling of architects and renovation enthusiasts is Designer Doors Inc. of River Falls, Wis. Originally a manufacturer of steel garage doors, company founder Ken Forsland said he was occasionally asked to replicate old wood doors or match the architecture on new homes. Spotting an emerging trend, Forsland

founded Designer Doors in the early '90s.

The company offers doors in colonial, arts and crafts, European and other styles. Although they open overhead and come with automatic controls, they appear to swing, slide or fold open as original carriage doors did. Options include true divided-lite windows, authentically replicated hardware and wood upgrades.

\$2,000 to \$4,500 and up, and \$3,500 to \$10,000 for double-wide. The company's					
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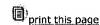
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## **Building Products Top 100 (1-25)**

#### 100 products that readers wanted to know more about.

#### By Stephanie Herzfeld

Bathroom ventilation, standby generators, home automation products, and tankless water heaters don't have much in common; however, they share the distinction of being some of the building products that you wanted to know the most about.

Spanning over 23 pages in the May/June issue of BUILDING PRODUCTS Magazine, you'll find the top 100 building products and materials that readers asked for information about during 2004 by mailing us reader service cards found at the back of each issue. The products come from the editorial pages of Building Products and its sister publications, BUILDER, CUSTOM HOME, AND REMODELING, and they represent diverse items that might save you installation time, boost your productivity, or make your clients say, "Wow!"

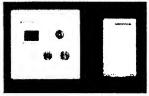
Each Top 100 product is listed with a photo, a descriptive caption, and the manufacturer's Web site and phone number. If you didn't see these products the first time they appeared, now's your chance to check them out. We hope you'll find some unique items that you can incorporate into your next projects. Happy hunting! BP

Rheem-1



Rheem. Pronto on-demand, tankless gas water heaters have no standing pilot lights and no storage tanks, eliminating the need to maintain a large supply of preheated water. A 4.2-gallon and a 7.4-gallon unit are available; both instantaneously deliver hot water whenever and wherever it's needed, says the maker. 800-432-8373. www.rheem.com.

Rinnai. The Continuum tankless gas water heater delivers up to 8.5 gallons per minute and



features a digital temperature control pad that can be located anywhere in the home. The

system can be set to exact temperatures to deliver hot water to multiple sources

at once while maintaining temperature consistency. It can be wall-mounted or recessed in exterior or interior locations. 866-746-6241. <a href="https://www.foreverhotwater.com">www.foreverhotwater.com</a>.

3



Racor. The HeavyLift garage ceiling storage system consists of a 4-foot-by-8-foot 14-gauge steel platform that is raised and lowered with a 4-foot crank arm; the platform is suspended on vinyl-coated steel cables. The system has a 300-pound capacity to hold a variety of items including tools, patio furniture, landscaping items, and seasonal decorations. 800-783-7725. www.racorinc.com.

Racor-3

4

Air Vent. The SolarCool roof-mounted solarpowered attic vent incurs no electrical costs; it runs during daylight hours to help keep attics ventilated, says the maker. It collects solar energy and converts it to electricity. Its dome is on a bracket that tilts and rotates for maximum sun exposure. 800-247-8368. www.airvent.com.



Air Vent-4

5



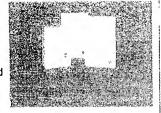
Takagi. The Mobius T-M1 tankless gas water heater delivers a maximum flow rate of 9.6 gallons per minute. Output temperatures can be adjusted between 100 and 176 degrees F. It measures just 24 inches high by 18 inches wide and 9 inches deep. Its compact design allows it to be on an exterior or interior wall, or installed in a cabinet with proper venting. 888-882-5244. www.takagi.com.

6

Takagi-5

Controlled Energy Corp.

With an average efficiency of 87 percent, the Bosch ProTankless GWH 635 ES gas water heater delivers up to 6.35 gallons per minute and can supply two major applications at once, the maker says. Its compact direct-vent, sealed-combustion design allows it to be mounted on a wall in a closet or other room. 800-495-1782. www.protankless.com.



Controlled Energy Corp-6

7



Owens Corning-7

Owens Corning. The QuietZone Acoustyle coffered wood style of custom millwork, claims the maker. Pre-finished coffered wood panels and trim pieces are incorporated into a standard metal T-rail grid mounted over a soundabsorbing material. Many other QuietZone

products are available from the firm. 800-438-7465. www.owenscorning.com.

8

Amarr. Inspired by the Biltmore Estate's architecture and history, six carriage ceiling system offers integrated sound absorption with the house door styles are available in the Biltmore Estate For Your Home collection, says the maker. Each model features a Western red cedar overlay and a choice of materials for the base of the door. Decorative hardware is optional. 800-503-3667. <a href="https://www.amarr.com.">www.amarr.com</a>.



Amarr-8

9

3 6 A 32 32 30 A3 Open House. Total Access Port (TAP) wall plate products come pre-configured and pre-assembled to ensure a tight connection. They converge household technologies, including video, audio, computer, telephone, and home automation control signals. Numerous models are available and are ideal for new construction

applications, says the maker. 800-999-5225. www.openhousesystems.com.

10

Open House-9

Kohler. Automatic residential generator systems provide dependable protection during unexpected power outages, says the firm. Available with 8 1/2- to 100-kW output capabilities, the generators provide emergency power to support a home's electrical needs for days or even weeks. The generators are fueled by either natural gas or liquid propane. 800-544-2444. www.kohler.com.



Kohler-10

11



Sunrise Solar-11

Sunrise Solar. The SunRise rooftop attic fan pulls heat out of the attic at a rate of 850 cfm, the firm says. The solar-powered unit, which can be installed in less than an hour, features stainless steel and aluminum internal components and a tough plastic exterior for durability in all types of climates, says the firm. The attic fan comes fully assembled. 219-558-2211.

www.sunrisesolar.net.

12

Wayne-Dalton. The idrive computer-driven garage door opener mounts to the wall directly above the door. When activated, a spring tube operates the door, eliminating the need for a chain, screw, or belt-drive mechanism. Eliminating these mechanisms provides quiet operation, says the maker. Accessories are available for the UL-listed product. 800-827-3667, www.wayne-dalton.com.



Wayne-Dalton-12

13



Old California Lantern-13

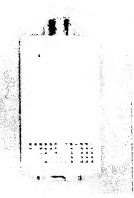
Old California Lantern. Handcrafted from solid brass, art glass, and handapplied finishes, light fixtures from this firm are available in a number of sizes and styles. Designed in the tradition of American-made bungalow lighting, the Holly Street lanterns pictured here are available in nine metal finishes. 800-577-6879.

www.oldcalifornia.com.

14

Noritz. Designed for wall-hung installation indoors or outdoors, the N-

069M Medium+ residential tankless gas water heater delivers 6.9 gallons per minute. The heater also features a TurboFlow capability that allows it to produce 7.9 gpm within a 35-degree temperature rise. The unit is covered by a 10-year warranty. 866-766-7489. www.noritzamerica.com.



Noritz-14

15

Travis Industries-15

Travis Industries. The Ring of Fire gas fire pit can be installed flush with a deck surface, placed into a bowl-shaped pedestal, or built into a custom brick, stone, or wood surround. The unit features three water spouts that re-circulate water from a built-in reservoir; the water cascades onto stones that are placed over tiny electric lamps, creating the illusion of glowing embers. 425-609-2500.

www.ringoffirebytravis.com.

16 Davinci Roofscapes. Made from an engineered polymer, synthetic slate

shingles weigh 250 pounds per square, can be cut with a utility knife, and come in collated bundles. They install with a nail gun or hammer and are as easy to put up as wood shake shingles, asserts the maker. The product, which has Class 4 impact and Class A fire ratings, comes in multiple shingle widths and color blends. 800-328-4624.

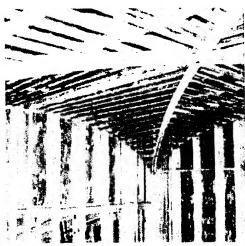
www.davinciroofscapes.com.

17



Arch. Davinci Roofscapes-16
Pre
-fabricated arch forms allow
pros to quickly and
consistently frame all types
of arches, barrel vaults,
groined cellings, domes, and
curved walls, asserts the
maker. Each form is custom
manufactured to the client's
specifications. They fasten
directly to lumber or steel
framing with screws or nalls
and drywall attaches directly
to the form. 623-935-5531

www.fastarchofamerica.com.



Fast Arch-17



Cuantum Windows & Doors-18 together door panels set on a sliding and folding mechanism that runs on either the sill or head of the system. Each panel car move independently of the

others, and multiple door panels can be configured in various combinations.

Openings up to 42 feet wide are possible, and one end panel can be operated fully for daily use. Multipoint locking hardware secures the doors. Lift/Slide doors also are available. 800-287-6650. <a href="https://www.quantumwindows.com">www.quantumwindows.com</a>.

19



OnQ Technologies-19

OnQ Technologies. The On-Q Home system organizes low-voltage communications wiring distribution. An array of snap-in modules supports telephone, data, local area network, audio, and video services. The modular design permits customization for home offices, entertainment, HVAC control, security, and lighting. 800-321-2343. www.ongtech.com.

20

LWO. Woodway Architectural Deckrail panels are part of the firm's pre-assembled deck rail system. Made from clear, kiln-dried and molded Western red cedar, the system

coordinates with several different deck rail accessories including posts; balusters; and top, sub, and bottom rails. The Deckrail panels come in lengths of 6 to 8 feet in five styles and can be painted or stained. 800-459-8718. <a href="https://www.woodwayproducts.com">www.woodwayproducts.com</a>.



LWO-20

21



KitchenAid. The front-loading washer and dryer have 3.7 cubic feet of capacity and feature Whisper Qulet Plus sound packages, the maker says. Offered in Meteorite, a metallic finish, the machines may be stacked, placed side by side, or set on a pedestal. 800-422-1230. <a href="https://www.kitchenaid.com">www.kitchenaid.com</a>.

22

KitchenAid-21

Amarr. Steel Classica collection carriage house garage doors feature the firm's DuraSafe pinch-

resistant technology. The doors, which come standard in white, can be painted and are available with polystyrene insulation. Classica garage doors come in 32 models and have 14-gauge galvanized steel hardware. 800-503-3667. <a href="https://www.amarr.com.">www.amarr.com.</a>

## 23



Crossville. Illuminessence glass tiles are available in the Prism Glass, Prism Glass Listellos, and Radiance Glass series. All three are made of cast translucent glass that is textured on the front and back to capture, refract, and bend light, the firm claims. The three collections, which are available in nine colors, can be used in wall, floor, and countertop applications. 800-221-9093.

www.crossvilleinc.com.

24

Crossville-23

Coyote Glass Design. Intaid with copper, gold, or silver, these kiln-formed glass sinks are first carved by hand and colored with the swirling shades of a desert palette. Each sink is then backed with one of the three precious metals. The Copper River model pictured here is one of 10 handcrafted designs from the firm. 254-947-0002.



Coyote Glass Design-24

25

www.coyoteglass.com.



Cole & Co. The Premier collection, originally designed for builders, includes three new vanities. Two French designs, the Provence and Lorraine models, feature traditional scrolls, floral motifs, curved side panels, and carved cabriole legs. The third unit, Verona, is inspired by Venetian architecture and has sculpted feet. All three feature alder construction with cherry veneers. 888-653-2284, www.vanitybath.com.

# In Hot Water: Tankless Water Heaters

Cole & Co.-25

The growing number of water-sucking appliances and fittings—from whirlpool tubs to jetted

showers to washing machines to dishwashers—is putting a severe strain on the home's water heater, which requires a recovery period once it runs out of hot water.

Say helio to tankless water heaters. Popular in Europe and Asia for decades, Americans are beginning to recognize these heaters as energy-saving appliances that can provide a source of continuous hot water.

Tankless water heaters offer several advantages over conventional water heaters: energy efficiency, a constant supply of hot water, and space savings.

The systems are relatively straightforward. Instead of continuously drawing on energy sources to heat, store, and reheat water in a tank, tankless systems flash-heat water as it's needed by passing it through a copper heat exchanger. What's more, there is no recovery period with these systems.

Craig Melstrand of Germantown, Wis.-based Majestic Homes says he's had a good response to tankless water heaters.

"We are one of the few builders in our area using them," Melstrand says. "The customer now is more knowledgeable and they're seeing these systems on TV."

Although tankless systems cost more up-front than conventional water heaters, several states offer tax incentives or rebates for these energy-efficient products.

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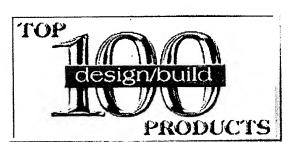
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96-100





1-5



Welcome to the 2004 Design/Build Top 100 Products section. In the following pages, we present the 100 products that readers of Design/Build Business found most interesting.

We invite you to browse these products to see which ones catch your eye. To learn more about any of the Top 100 products in this section, use the Reader Service Card inside this issue.



1. Rais & Wittus' Gizeh outdoor fireplace and grill from Denmark is made of Cor-Ten steel. which permanently oxidizes and lasts a lifetime outside. The Gizeh is designed to be used as a fireplace, a grill and as an art sculpture. The fireplace measures 77-in. tall, 19-in. wide, and 21-in. deep.



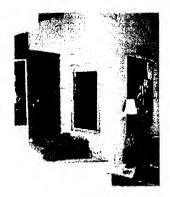
2. Rheem Water Heaters' Pronto tankless water heater is designed to provide instantaneous hot water on demand. Two energy-saving models are available that have no standing pilot light and no storage tank, eliminating the need to maintain a large supply of preheated water.

3. L.E. Johnson Products' pocket door frames are available to fit doors up to 5 ft. wide by 9 ft. high. The frame works with all doors 11/8 in. to 13/4 in. thick and weighing up to 125 pounds. Heavy-duty ball bearing hangers are available for sliding doors up to 200 pounds. The track's box shape and convex rails make it impossible for hanger wheels to jump off.





4. BioBased Systems' BioBased 501 soybased spray-in foam insulation is a lightweight, two-part soybean oil-based polyurethane designed to save on energy costs. The formula emits no VOCs or CFCs during production or application. It behaves like a petroleum-based plastic foam without any of the environmental side effects. It uses the annually renewable resource of soybeans and contains no formaldehyde.



5. Humidifall is an in-wall waterfall for any interior wall of a home or office. The splash-free design humidifies up to 2,700 sq. ft. of space and the falling water attracts and captures alrborne contaminants. Humidifall connects to and maintains a fresh water supply, and a UV light eliminates mold, algae, germs and bacteria.

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6. Infloor Heating Systems' infloor radiant heating installs in a thin-set mortar bed or cement underlayment. The 120v AC or 240v AC electric cables or electric mat system attaches quickly to either wood or concrete subfloors. The electric cable is flexible and moisture-resistant.

7. Diamond Spas' stainless steel stairways are

ADVENTISEMENT :

available in varying sizes and can accommodate a 180-degree-plus rotation. Stainless steel offers strength and design opportunities for custom orders and unique installations.



96-100





8. Auton Motorized Systems' flip-down plasma unit is designed to help conceal a TV in the ceiling for those with little room to spare, taking up only 111/2 in. because it lies flat when not in use. Auton's line of Plasma Lifts are offered in three styles: the ceiling pop-down, the basic up-and-down and the flip-down model.



9. UltraGlas' decorative architectural glass can be created in an array of translucent, 3-D textures, patterns and designs. UltraGlas can be specified in a choice of 12 colors or finished in virtually any color or combination of colors. The textures create natural diffusion, providing privacy without restricting light transmission.



random finish floor tiles are produced via a patented manufacturing process in which glass is combined with metal pigments melted into the back side of the tile. Skid-resistant and available in two colors, proper installation requires no special tools or materials.

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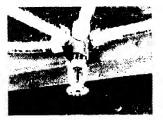




11-15



11. HB&G's Craftsman-style PermaCast column (pictured) and the recessed panel PermaCast column are designed to be load-bearing, insect-proof, weatherproof and low maintenance. Both carry lifetime warranties. The Craftsman-style PermaCast column is available in four sizes and the recessed panel column is available in nine sizes.



12. Uponor Wirsbo's patented Aquasafe combination plumbing and fire sprinkler system provides homeowners with affordable and reliable home fire protection. The dual-purpose system feeds both the sprinklers and the coldwater plumbing fixtures. The system is designed for simplified installation.



13. Bridgestone Industrial Products' Luxaura Light Guide lets the specifier select the diameter, length, shape and color of the optical acrylic rod lit by LEDs to create a unique appearance. The low-voltage product can be shaped and made to be waterproof, increasing its application options. It can be used in a number of applications with low ambient light where neon or fluorescent lighting is not suitable.



14. Deckorators' railing component, The Connector, allows contractors to secure the original Deckorator balusters to the rail without drilling. The 3/4- by 5/8-in. molded plastic is hollowed to allow screwing directly to the rail. The Connector has a small lip along the bottom to support the aluminum baluster and eliminates contact with the rail surface.



15. Amarr has introduced the Classica Collection, a line of pinch-resistant steel garage doors with carriage house design embossments. The patterns are pressed into the steel without the use of overlays, eliminating add-on pieces that could fade or fall off the door over time.

#### **RESIDENTIAL DESIGN & BUILD**

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"The garage door is now treated like the front door of your home," said Wright, company president. "It should complement and enhance your home's appearance."

On attached garages that face the street, a garage door can make or break a home's curb appeal. That's the reason consumers are increasingly choosing doors with features matching the style of their home, whether it be a colonial, Tudor, Craftsman bungalow, Italianate or four-square.

A custom-made look can come at a high price -- \$10,000 or more for a doublewide door, including installation. But there's also a steady market for the basic, insulated, doublewide steel door, which starts around \$1,000. And for those who want a custom-made look with the basic price tag, there are options, too.

Some handy homeowners and clever contractors have learned how to customize standard cedar doors -- a single door costs around \$1,000 -- by adding decorative details such as windows, wood rails and molding. That was the approach Susan and Doug McNair of Freeport chose two years ago when they were building a Frank Lloyd Wright-inspired arts and crafts-style home.

The four-car detached garage was designed to look like a carriage house. With every detail of the home true to the style, "the only thing to do was custom," Susan said.

Instead, the couple's contractor, Leroy James of GBL Builders in Harmony, added

cedar trim to four single cedar doors and cut and installed windows that matched those on the house. As a result, the McNairs now have authentic looking arts and crafts-style garage doors at a fraction of the cost of custom-made.

Homeowners' demand for detail, tradition and distinctive design features has prompted manufacturers of standard steel doors to expand their product lines. Two industry leaders, Raynor and Clopay, have added upscale premium lines in the past few years.

Raynor, based in Dixon, Ill., has its Masterpiece series, which boasts an array of style options, including five color choices or a wood-grain finish and several panel designs and window styles. The company's Web site, <a href="http://www.raynor.com/">http://www.raynor.com/</a>, even offers consumers a chance to experiment with different options and design their own garage door. You might try a colonial panel with "sunburst" windows, for example, or a raised panel with "Ranch Elegance" beveled windows.

Clopay, for its part, has many design options in its Premium series, including windows with a leaded, beveled or stained-glass look. The windows are actually made of acrylic, for safety and durability, and conveniently snap into the door. The windows can be coupled with panels in several different styles and dimensions. The designer acrylic inserts add about \$300 to the cost of the door. Insulated glass or structural upgrades such as double hinges can add \$100 to \$300. Clopay's Web site is <a href="http://www.clopay.com/">http://www.clopay.com/</a>.

Although steel remains the most popular material choice among consumers and contractors because of its durability and low maintenance, wood has made a comeback in recent years.

"There are older, established neighborhoods where my customers only want wood doors," said Wright. "And I've been installing wood doors in new construction as well. It offers more flexibility in painting and staining, which many people want."

That translates to more maintenance, however. Unlike steel, which never needs to be repainted, wood requires regular repainting and restaining. Wood doors are most commonly made from durable, rot-resistant cedar, with an average price of \$2,000 to \$3,000 for a doublewide door, including installation.

Clopay recently launched a high-end brand of custom-made wood doors in a variety of styles under the brand name of Holmes. The line offers overhead doors that resemble many historical carriage styles.

But the darling of architects and renovation enthusiasts is Designer Doors Inc. of River Falls, Wis. Originally a manufacturer of steel garage doors, company founder Ken Forsland said he was occasionally asked to replicate old wood doors or match the architecture on new homes. Spotting an emerging trend, Forsland

founded Designer Doors in the early '90s.

The company offers doors in colonial, arts and crafts, European and other styles. Although they open overhead and come with automatic controls, they appear to swing, slide or fold open as original carriage doors did. Options include true divided-lite windows, authentically replicated hardware and wood upgrades.

The price range for a standard single-wide garage door from Designer Doors is

\$2,000 to \$4,500 and up, and \$3,500 to \$10,000 for double-wide. The company's Web site is <a href="http://www.designerdoors.com/">http://www.designerdoors.com/</a> .	
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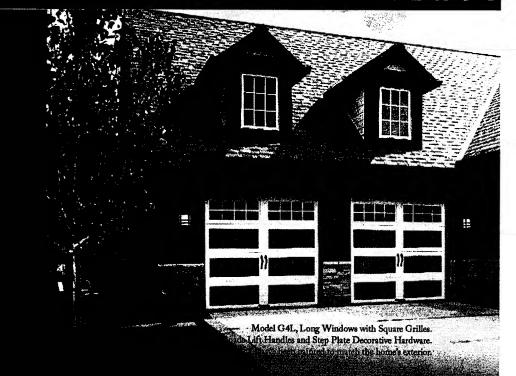
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Long Top Section		Arch 1 Plain	
Plain Short			
Tam Olor		Arch 1 with Grilles	
Plain Long		Arch 2 Plain	
Long with Rectangular Grilles		Arch 2 with Grilles	
Short with Square Grilles  Long with		Arch 3 Plain	
Square Grilles		Arch 3 with Grilles	

## Beautiful Carriage House Style Designs





## Decorative Hardware

#### Available Colors







## Number of Sections/Section Heights

Door Height	# of Sections	Section Height Sizes
	The transfer of the transfer o	
76"	1. 4	24"-21"-21"-24"
9' 0"		24" - 21" - 21" - 21" - 21"
	9	24 - 21 - 21 - 21
10' 0"	5	241 241 241 241 241
10 0	3	24" - 24" - 24" - 24" - 24"
441.05		
11' 0"	6	24" - 24" - 21" - 21" - 21" - 21"
12' 0"	6	24" - 24" - 24" - 24" - 24" - 24"

Most door heights available in 3" increments. Most door widths available in 2" increments. See your Clopay Pro Series Dealer for details.

## Durable Construction





**Galvanized Torsion Springs** 

- 2" Steel frame construction for long-lasting performance.
- Steel coated with hot dipped galvanizing and topped with a baked-on primer and top coat for a virtually maintenance-free surface.
- Optional insulation improves energy efficiency. 6.3 R-value (Models G4SV and G4LV).
- Galvanized torsion springs are attractive and longer lasting.
- Nylon rollers are durable and quiet.
- Rust-proof, aluminum bottom weatherseal retainer and vinyl astragal help seal out the elements.
- See your Clopay Dealer for WINDCODE® door availability.



America's Favorite Garage Doors\*









For more information on Clopay products, call: 1-800-2CLOPAY (1-800-225-6729) or visit www.clopaydoor.com for your nearest Clopay dealer. ©Clopay Building Products Company, Inc. 2005, A Griffon Company, Printed in U.S.A.



# Creekeside

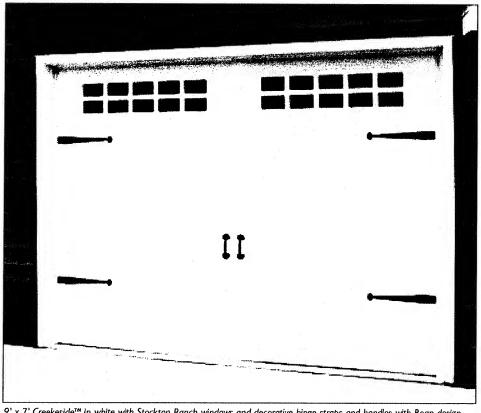
STEEL CARRIAGE HOUSE DOOR



Steele Falls

# Creekeside<sup>™</sup>

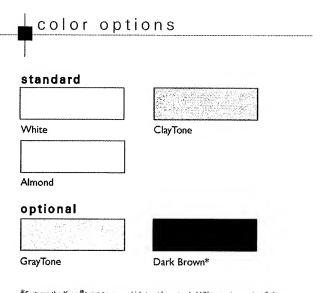
steel carriage house doors



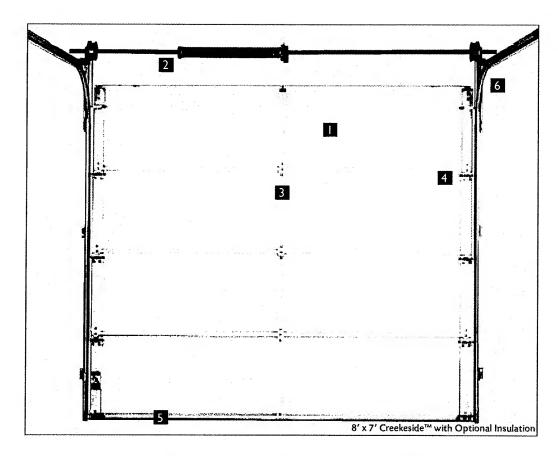
9' x 7' Creekeside<sup>TM</sup> in white with Stockton Ranch windows and decorative hinge straps and handles with Bean design.

For the architectural elegance of a carriage house door in a maintenance-free steel design, Creekeside™ is the clear choice. Featuring unmatched durability and the Raynor Finger Protection System™, Creekeside™ offers an affordable alternative to custom wood doors. With 2" door sections, the stylish Creekeside™ model is available with optional polystyrene insulation, five appealing color selections, three designer window offerings, decorative face hardware, PREMIUM and DELUXE interior hardware packages, and door sections warranted against rust for "As Long As You Own Your Home".

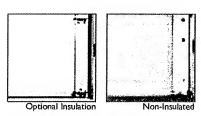
∟strong 2" thick sections
Creekeside $^{\text{TM}}$ 2" thick door sections are made from high-strength, impact-resistant, 24-gauge steel.
24-gauge steel 2 Galvanized layer
3 Epoxy primer 4 Baked-on finish
2 2" Thick



\*Features the Kynar® paint process, which provides extended UV protection against fading



- **Door sections** are constructed from hot-dipped galvanized steel and coated with a baked-on, fade-resistant polyester finish for maximum durability, rust-resistance and color retention.
- **2 Springs** are designed to precisely match each door's weight for proper balance and smooth operation.
- 3 Hinges, made of high-quality steel, feature an attractive, low profile design and are powdercoated white to provide maximum protection against rust.
- 4 Rollers with steel wheels and ball bearings provide smooth, quiet operation.
- 5 Vinyl weatherseal along the bottom helps keep out wind and rain while an optional perimeter weatherseal creates a seal along the exterior top and sides of the door.
- 6 **Track** is adjustable so that the door always fits tightly against the door opening, preventing energy loss.



**Optional insulation** is made of expanded polystyrene and helps to reduce noise while providing an additional heat barrier.



Cable attachments prevent accidents and injuries. The tamperresistant counterbalance cable attach-

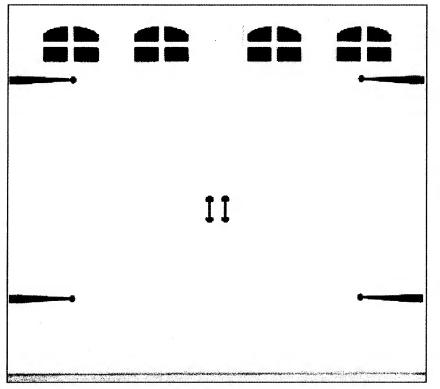
ment cannot be released while the cable is under tension.



Finger protection is important to today's homeowner. As your door closes, the exclusive Raynor

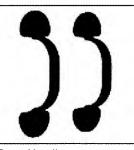
Finger Protection System™ gently pushes fingers away from section joints.

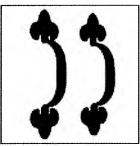
## decorative face hardware



9' x 8' Creekeside $^{1M}$  in white with Cascade Colonial windows and decorative hinge straps and handles with Bean design.

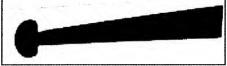
Add character to your Raynor Creekeside™ door with attractive decorative face hardware. The black matte powdercoated straps and handles are designed to appear hand-forged, adding a historically-accurate dimensional quality to your door. Choose from handles and 18" hinge straps with Bean or Fleur-de-lis designs.



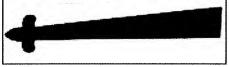


Bean Handles

Fleur-de-lis Handles

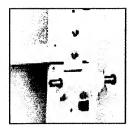


Bean Strap



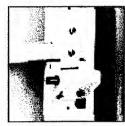
Fleur-de-lis Strap

## interior hardware systems



#### premium

The EnduraCote<sup>™</sup> Hardware System, comes with extended-life springs, track and hardware that are powdercoated white to provide a clean, finished look and maximum protection against rust. Nylon rollers with steel ball bearings also help provide superior noise reduction.



#### deluxe

Features galvanized steel track and steel wheel, ball-bearing rollers for smooth, reliable operation. Hinges are powdercoated white.

#### warranty

#### premium

**Door Sections\*** 

"For As Long As You Own Your Home" against rust Hardware/Springs

"For As Long As You Own Your Home"

#### deluxe

**Door Sections\*** 

"For As Long As You Own Your Home" against rust Hardware/Springs

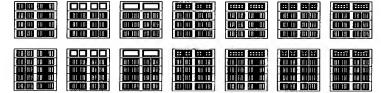
5 Year

\*See full warranty details, available at www.raynor.com.

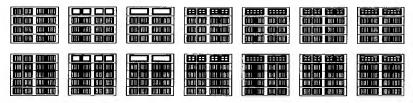
Doors below shown in standard sizes. Creekeside™ doors are available in: Widths: 7'10" to 10'4" (single car) and 15'6" to 19' (double car)

Heights: 6'0", 6'3", 6'6", 6'9", 7'0", 7'6", 7'9". 8'0"

#### 8' wide



#### 9' wide



Raynor Creekeside™ doors utilize multiple panel embossment sizes to achieve a consistent appearance in all door widths. So, even if your garage has different sized openings, you can be assured that your Creekeside™ doors will present a seamless appearance from door to door.

#### 10' wide



#### 16' wide

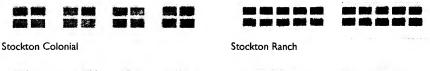


#### 18' wide



window styles

#### snap-in window designs





Cascade Colonial

Cascade Ranch

## clear and obscure glass



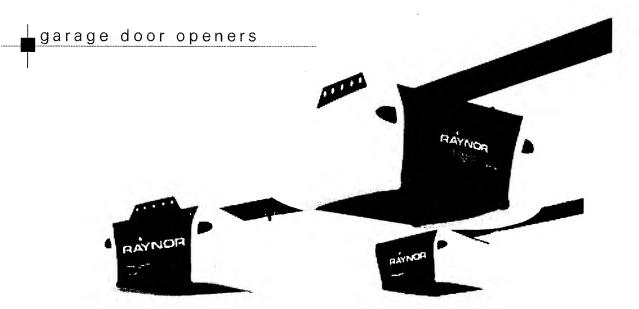
Glass Colonial



Glass Ranch

Obscure Colonial

Obscure Ranch

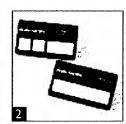


Raynor offers a full line of powerful, reliable, garage door openers that provide maximum security and convenience. Choose from 1/3 to 3/4 horsepower chain, belt and screw drive openers that feature advanced electronics and long-lasting performance year in and year out. With the best warranties in the industry, Raynor openers carry warranties varying from lifetime on motors and 1 to 5 years on components.

For super-quiet operation, select models featuring the Motor Vibration Isolation System, a revolutionary technology that is trouble-free, year after year. Designed to protect you and your family, safety and security features include the PosiLock™ Security System, adjustable light delay, Protector System® photoelectric eyes, and Safety Signal™ hand-held transmitters.

For more information on Raynor openers, find the authorized dealer nearest you at www.raynor.com or call 800-4-RAYNOR (472-9667).

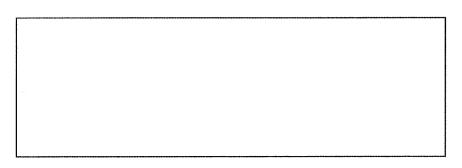




Protector System<sup>™</sup> photoelectric eyes keep your family safe. If an object breaks the light beam while closing, the door will stop and reverse its direction until fully open. 2 Safety Signal <sup>™</sup> hand-held transmitters accept millions of possible code combinations, making it virtually impossible for burglars to capture your transmitter's code.



The in-vehicle universal remote control. See your automobile dealer for availability.





www.raynor.com

1-800-4-RAYNOR (472-9667)

Raynor Worldwide P.O. Box 448, 1101 East River Road Dixon, IL 61021-0448 Apr 25 06 02:51p

NORTHWEST DOOR, INC.

503-744-1003

р.

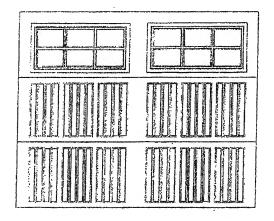
# "A NEW ERA OF GARAGE DOORS IS COMING SOON!"

louroducing:

Available Spring-Summer 2006

Thermo

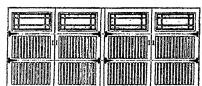




The Therma Classic is the latest addition to our Classic Product Lineup of Carriage House Style garage doors. High Definition Steel allows for a much deeper and defined embossment than that of many other steel garage doors.

Beauty is more than skin deep, the 2" thick sandwich construction makes Therma Classic one of the strongest steel doors available today and the UPC Free Polystyrene core provides an impressive 9.2 "R-Value".

### Large selection of panel arrangements and window designs to choose from!



Double Car Design S009S with Optional:

- •Simulated Center Post
  - Decorative Hardware

-**Up 16**•20n Wide =14n High
-**With**-

•27n, 28n, 31n a 32n Door Sections



Model SM04S
• Multi Panel Design



Model S106A

Arched Lites

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# Professional's Dales a Bullilla Produció<sup>bi</sup>

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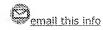
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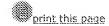
Products

Companies

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### **Building Products Top 100 (1-25)**

100 products that readers wanted to know more about.

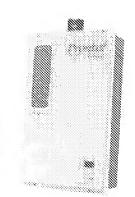
#### By Stephanie Herzfeld

Bathroom ventilation, standby generators, home automation products, and tankless water heaters don't have much in common; however, they share the distinction of being some of the building products that you wanted to know the most about.

Spanning over 23 pages in the May/June issue of BUILDING PRODUCTS Magazine, you'll find the top 100 building products and materials that readers asked for information about during 2004 by mailing us reader service cards found at the back of each issue. The products come from the editorial pages of Building Products and its sister publications, BUILDER, CUSTOM HOME, AND REMODELING, and they represent diverse items that might save you installation time, boost your productivity, or make your clients say, "Wow!"

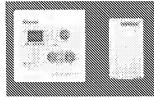
Each Top 100 product is listed with a photo, a descriptive caption, and the manufacturer's Web site and phone number. If you didn't see these products the first time they appeared, now's your chance to check them out. We hope you'll find some unique items that you can incorporate into your next projects. Happy hunting! BP

Rheem-1



Rheem. Pronto on-demand, tankless gas water heaters have no standing pilot lights and no storage tanks, eliminating the need to maintain a large supply of preheated water. A 4.2-gallon and a 7.4-gallon unit are available; both instantaneously deliver hot water whenever and wherever it's needed, says the maker. 800-432-8373. www.rheem.com.

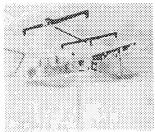
Rinnai. The Continuum tankless gas water heater delivers up to 8.5 gallons per minute and



Rinnai-2

features a digital temperature control pad that can be located anywhere in the home. The system can be set to exact temperatures to deliver hot water to multiple sources at once while maintaining temperature consistency. It can be wall-mounted or recessed in exterior or interior locations. 866-746-6241. www.foreyerhotwater.com.

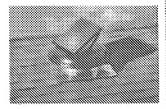
3



Racor. The HeavyLift garage ceiling storage system consists of a 4-foot-by-8-foot 14-gauge steel platform that is raised and lowered with a 4foot crank arm; the platform is suspended on vinyl-coated steel cables. The system has a 300pound capacity to hold a variety of items including tools, patio furniture, landscaping items, and seasonal decorations. 800-783-7725. www.racorinc.com.

Racor-3

Air Vent. The SolarCool roof-mounted solarpowered attic vent incurs no electrical costs; it runs during daylight hours to help keep attics ventilated, says the maker. It collects solar energy and converts it to electricity. Its dome is on a bracket that tilts and rotates for maximum sun exposure, 800-247-8368, www.airvent.com.



Air Vent-4

5



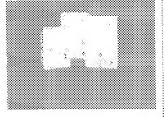
Takagi. The Mobius T-M1 tankless gas water heater delivers a maximum flow rate of 9.6 gallons per minute. Output temperatures can be adjusted between 100 and 176 degrees F. It measures just 24 inches high by 18 inches wide and 9 inches deep. Its compact design allows it to be on an exterior or interior wall, or installed in a cabinet with proper venting. 888-882-5244. www.takagi.com.

6

Takagi-5

Controlled **Energy Corp.** 

With an average efficiency of 87 percent, the Bosch ProTankless GWH 635 ES gas water heater delivers up to 6.35 gallons per minute and can supply two major applications at once, the maker says. Its compact direct-vent, sealedcombustion design allows it to be mounted on a wall in a closet or other room. 800-495-1782. www.protankless.com.



Controlled Energy Corp-6

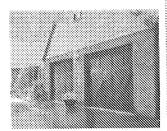


Owens Corning-7

Owens Corning. The QuietZone Acoustyle coffered wood style of custom millwork, claims the maker. Pre-finished coffered wood panels and trim pieces are incorporated into a standard metal T-rail grid mounted over a soundabsorbing material. Many other QuietZone products are available from the firm. 800-438-7465. www.owenscorning.com.

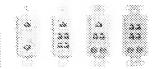
http://www.ebuild.com/guide/resources/product-news.asp?ID=138247; Tuesday, June 13, 2006

Amarr. Inspired by the Biltmore Estate's architecture and history, six carriage ceiling system offers integrated sound absorption with the house door styles are available in the Biltmore Estate For Your Home collection, says the maker. Each model features a Western red cedar overlay and a choice of materials for the base of the door. Decorative hardware is optional. 800-503-3667. <a href="https://www.amarr.com">www.amarr.com</a>.



Amarr-8

9



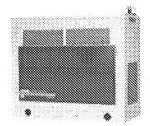
Open House-9

Open House. Total Access Port (TAP) wall plate products come pre-configured and pre-assembled to ensure a tight connection. They converge household technologies, including video, audio, computer, telephone, and home automation control signals. Numerous models are available and are ideal for new construction

applications, says the maker. 800-999-5225. www.openhousesystems.com.

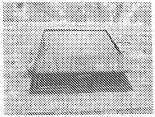
10

Kohler. Automatic residential generator systems provide dependable protection during unexpected power outages, says the firm. Available with 8 1/2- to 100-kW output capabilities, the generators provide emergency power to support a home's electrical needs for days or even weeks. The generators are fueled by either natural gas or liquid propane. 800-544-2444. www.kohler.com.



Kohler-10

11



Sunrise Solar-11

Sunrise Solar. The SunRise rooftop attic fan pulls heat out of the attic at a rate of 850 cfm, the firm says. The solar-powered unit, which can be installed in less than an hour, features stainless steel and aluminum internal components and a tough plastic exterior for durability in all types of climates, says the firm. The attic fan comes fully assembled. 219-558-2211.

www.sunrisesolar.net.

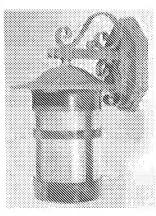
12

Wayne-Dalton. The idrive computer-driven garage door opener mounts to the wall directly above the door. When activated, a spring tube operates the door, eliminating the need for a chain, screw, or belt-drive mechanism. Eliminating these mechanisms provides quiet operation, says the maker. Accessories are available for the UL-listed product. 800-827-3667. www.wayne-dalton.com.



Wayne-Dalton-12

13



Old California Lantern-13

Old California Lantern. Handcrafted from solid brass, art glass, and handapplied finishes, light fixtures from this firm are available in a number of sizes and styles. Designed in the tradition of American-made bungalow lighting, the Holly Street lanterns pictured here are available in nine metal finishes. 800-577-6679.

www.oldcaiifornia.com.

14

Noritz. Designed for wall-hung installation indoors or outdoors, the N-

069M Medium+ residential tankless gas water heater delivers 6.9 gallons per minute. The heater also features a TurboFlow capability that allows it to produce 7.9 gpm within a 35-degree temperature rise. The unit is covered by a 10-year warranty. 866-766-7489.

www.noritzamerica.com.



Noritz-14

15



Travis Industries-15

Travis Industries. The Ring of Fire gas fire pit can be installed flush with a deck surface, placed into a bowl-shaped pedestal, or built into a custom brick, stone, or wood surround. The unit features three water spouts that re-circulate water from a built-in reservoir; the water cascades onto stones that are placed over tiny electric lamps, creating the illusion of glowing embers. 425-609-2500.

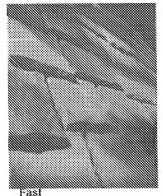
www.ringoffirebytravis.com.

16 Davinci Roofscapes. Made from an engineered polymer, synthetic slate

shingles weigh 250 pounds per square, can be cut with a utility knife, and come in collated bundles. They install with a nail gun or hammer and are as easy to put up as wood shake shingles, asserts the maker. The product, which has Class 4 impact and Class A fire ratings, comes in multiple shingle widths and color blends. 800-328-4624.

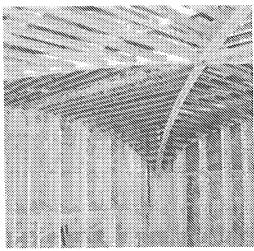
www.davinciroofscapes.com.

17



Arch. Davinci Roofscapes-16
Pre
-fabricated arch forms allow
pros to quickly and
consistently frame all types
of arches, barrel vaults,
groined ceilings, domes, and
curved walls, asserts the
maker. Each form is custom
manufactured to the client's
specifications. They fasten
directly to lumber or steel
framing with screws or nails
and drywall attaches directly
to the form. 623-935-5531

www.fastarchofamerica.com.



Fast Arch-17

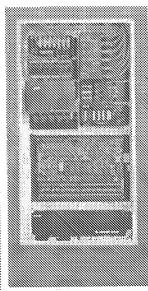


Ouantum Windows & Doors-18 together door panels set on a sliding and folding mechanism that runs on either the sill or head of the system. Each panel car move independently of the

others, and multiple door panels can be configured in various combinations.

Openings up to 42 feet wide are possible, and one end panel can be operated fully for daily use. Multipoint locking hardware secures the doors. Lift/Slide doors also are available. 800-287-6650. <a href="https://www.guantumwindows.com">www.guantumwindows.com</a>.

## 19



OnQ Technologies-19

OnQ Technologies. The On-Q Home system organizes low-voltage communications wiring distribution. An array of snap-in modules supports telephone, data, local area network, audio, and video services. The modular design permits customization for home offices, entertainment, HVAC control, security, and lighting. 800-321-2343.

# 20

LWO. Woodway Architectural Deckrail panels are part of the firm's pre-assembled deck rail system. Made from clear, kiln-dried and molded Western red cedar, the system

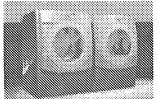
accessories including posts; balusters; and top, sub, and bottom rails. The Deckrail panels come in lengths of 6 to 8 feet in five styles and can be painted or stained. 800-459-8718. <a href="www.woodwayproducts.com">www.woodwayproducts.com</a>.

coordinates with several different deck rail



LWO-26

# 21



KitchenAid. The front-loading washer and dryer have 3.7 cubic feet of capacity and feature Whisper Quiet Plus sound packages, the maker says. Offered in Meteorite, a metallic finish, the machines may be stacked, placed side by side, or set on a pedestal. 800-422-1230.

www.kitchenaid.com.

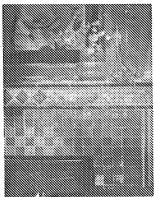
22

KitchenAid-21

Amarr. Steel Classica collection carriage house garage doors feature the firm's DuraSafe pinch-

resistant technology. The doors, which come standard in white, can be painted and are available with polystyrene insulation. Classica garage doors come in 32 models and have 14-gauge galvanized steel hardware. 800-503-3667. www.amarr.com.

### 23



Crossville. Illuminessence glass tiles are available in the Prism Glass, Prism Glass Listellos, and Radiance Glass series. All three are made of cast translucent glass that is textured on the front and back to capture, refract, and bend light, the firm claims. The three collections, which are available in nine colors, can be used in wall, floor, and countertop applications. 800-221-9093.

www.crossvilleinc.com.

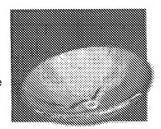
# 24

Crossville-23

Coyote Glass

**Design.** Inlaid with copper, gold, or silver, these kiln-formed glass sinks are first carved by hand and colored with the swirling shades of a desert palette. Each sink is then backed with one of the three precious metals. The Copper River model pictured here is one of 10 handcrafted designs from the firm. 254-947-0002.

www.coyoteglass.com.



Coyote Glass Design-24

25



Cole & Co. The Premier collection, originally designed for builders, includes three new vanities. Two French designs, the Provence and Lorraine models, feature traditional scrolls, floral motifs, curved side panels, and carved cabriole legs. The third unit, Verona, is inspired by Venetian architecture and has sculpted feet. All three feature alder construction with cherry veneers. 888-653-2284. www.yanitybath.com.

# In Hot Water: Tankless Water Heaters

Cole & Co.-25

The growing number of water-sucking appliances and fittings—from whirlpool tubs to jetted

showers to washing machines to dishwashers—is putting a severe strain on the home's water heater, which requires a recovery period once it runs out of hot water.

Say hello to tankless water heaters. Popular in Europe and Asia for decades, Americans are beginning to recognize these heaters as energy-saving appliances that can provide a source of continuous hot water.

Tankless water heaters offer several advantages over conventional water heaters: energy efficiency, a constant supply of hot water, and space savings.

The systems are relatively straightforward. Instead of continuously drawing on energy sources to heat, store, and reheat water in a tank, tankless systems flash-heat water as it's needed by passing it through a copper heat exchanger. What's more, there is no recovery period with these systems.

Craig Melstrand of Germantown, Wis.-based Majestic Homes says he's had a good response to tankless water heaters.

"We are one of the few builders in our area using them," Melstrand says. "The customer now is more knowledgeable and they're seeing these systems on TV."

Although tankless systems cost more up-front than conventional water heaters, several states offer tax incentives or rebates for these energy-efficient products.

Source: BUILDING PRODUCTS Magazine

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**TOP 100** 

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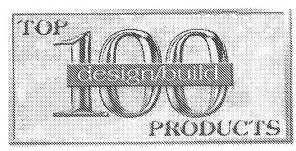
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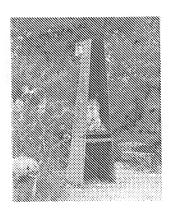


1-5

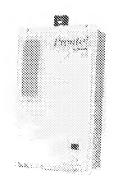


Welcome to the 2004 Design/Build Top 100 Products section. In the following pages, we present the 100 products that readers of Design/Build Business found most interesting.

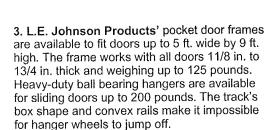
We invite you to browse these products to see which ones catch your eye. To learn more about any of the Top 100 products in this section, use the Reader Service Card inside this issue.



1. Rais & Wittus' Gizeh outdoor fireplace and grill from Denmark is made of Cor-Ten steel, which permanently oxidizes and lasts a lifetime outside. The Gizeh is designed to be used as a fireplace, a grill and as an art sculpture. The fireplace measures 77-in. tall, 19-in. wide, and 21-in. deep.

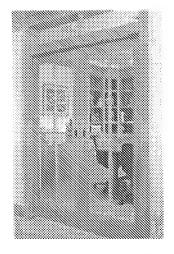


2. Rheem Water Heaters' Pronto tankless water heater is designed to provide instantaneous hot water on demand. Two energy-saving models are available that have no standing pilot light and no storage tank, eliminating the need to maintain a large supply of preheated water.



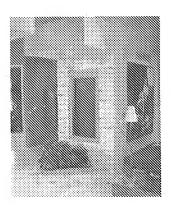


AUTHORN





4. BioBased Systems' BioBased 501 soybased spray-in foam insulation is a lightweight, two-part soybean oil-based polyurethane designed to save on energy costs. The formula emits no VOCs or CFCs during production or application. It behaves like a petroleum-based plastic foam without any of the environmental side effects. It uses the annually renewable resource of soybeans and contains no formaldehyde.



**5. Humidifall** is an in-wall waterfall for any interior wall of a home or office. The splash-free design humidifies up to 2,700 sq. ft. of space and the falling water attracts and captures airborne contaminants. Humidifall connects to and maintains a fresh water supply, and a UV light eliminates mold, algae, germs and bacteria.

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61-65

66-70 71-75 76-80 81-85 86-90 91-95 96-100 6-10



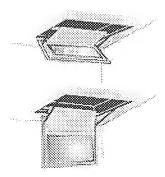
6. Infloor Heating Systems' infloor radiant heating installs in a thin-set mortar bed or cement underlayment. The 120v AC or 240v AC electric cables or electric mat system attaches quickly to either wood or concrete subfloors. The electric cable is flexible and moisture-resistant.



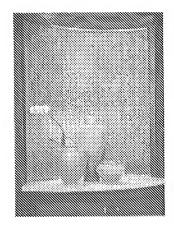
ADVERTISEMENT

7. Diamond Spas' stainless steel stairways are available in varying sizes and can accommodate a 180-degree-plus rotation. Stainless steel offers strength and design opportunities for custom orders and unique installations.

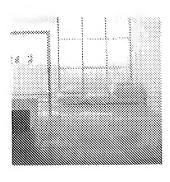




8. Auton Motorized Systems' flip-down plasma unit is designed to help conceal a TV in the ceiling for those with little room to spare, taking up only 111/2 in. because it lies flat when not in use. Auton's line of Plasma Lifts are offered in three styles: the ceiling pop-down, the basic up-and-down and the flip-down model.



9. UltraGlas' decorative architectural glass can be created in an array of translucent, 3-D textures, patterns and designs. UltraGlas can be specified in a choice of 12 colors or finished in virtually any color or combination of colors. The textures create natural diffusion, providing privacy without restricting light transmission.



random finish floor tiles are produced via a patented manufacturing process in which glass is combined with metal pigments melted into the back side of the tile. Skid-resistant and available in two colors, proper installation requires no special tools or materials.

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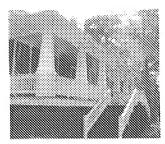


**TOP 100** 

1-5 6-10 11-15 16-20 21-25 26-30 31-35 36-40 41-45 46-50 51-55 56-60 61-65 66-70 71-75 76-80 81-85

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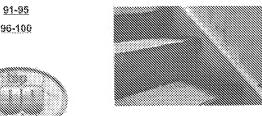
11-15



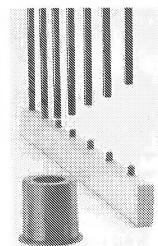
11. HB&G's Craftsman-style PermaCast column (pictured) and the recessed panel PermaCast column are designed to be loadbearing, insect-proof, weatherproof and low maintenance. Both carry lifetime warranties. The Craftsman-style PermaCast column is available in four sizes and the recessed panel column is available in nine sizes.



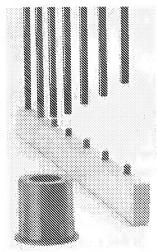
12. Uponor Wirsbo's patented Aquasafe combination plumbing and fire sprinkler system provides homeowners with affordable and reliable home fire protection. The dual-purpose system feeds both the sprinklers and the coldwater plumbing fixtures. The system is designed for simplified installation.



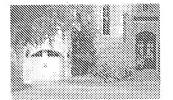
13. Bridgestone Industrial Products' Luxaura Light Guide lets the specifier select the diameter, length, shape and color of the optical acrylic rod lit by LEDs to create a unique appearance. The low-voltage product can be shaped and made to be waterproof, increasing its application options. It can be used in a number of applications with low ambient light where neon or fluorescent lighting is not suitable.



14. Deckorators' railing component, The Connector, allows contractors to secure the original Deckorator balusters to the rail without drilling. The 3/4- by 5/8-in. molded plastic is hollowed to allow screwing directly to the rail. The Connector has a small lip along the bottom to support the aluminum baluster and eliminates contact with the rail surface.



15. Amarr has introduced the Classica Collection, a line of pinch-resistant steel garage doors with carriage house design embossments. The patterns are pressed into the steel without the use of overlays, eliminating add-on pieces that could fade or fall off the door over time.



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